



Product Selection Manual (1)

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01- POWER SUPPLY

serial number	model	Input voltage (v)	Output voltage (v)	Output current (a)	Package size specification	main feature	Benchmark model	Benchmarking brand	remarks
1	AST4600IL	4.5V~20V	0.6V~5V	10A	15mm×15mm×6.0mm(LGA)	10A High Efficiency DC-DC Power Supply	LTM4600	ADI	
2	AST4601I	4.5V~20V	0.6V~5V	12A	15mm×15mm×6.6mm(BGA)	12A High Efficiency DC-DC Power Supply	LTM4601	ADI	
3	AST4602IL	4.5V~20V	0.6V~5V	6A	15mm×15mm×6.0mm(LGA)	6A High efficiency DC-DC	LTM4602	ADI	
4	AST4607I	4.5V~36V	0.8V~24V	Step up 5A step down 10A	15mmX 15mmX6.6mm (BGA) 15mmX 15mmX6.0mm (LGA)	36VIN, 24VOUT, high efficiency, buck-boost DC-DC power supply	LTM4607	ADI	
5	AST4609I	4.5V~36V	0.8V~34V	Step up 4A step down 10A	15mmX 15mmX6.6mm (BGA) 15mmX 15mmX6.0mm (LGA)	36VIN, 34VOUT, high efficiency, buck-boost DC-DC power supply	LTM4609	ADI	
6	AST4612IL	5V~30V	3.3V~15V	5A	15mmX 15mmX6.0mm (LGA)	36Vin, 15Vout, 5A DC-DC power supply	LTM4612	ADI	
7	AST4613I	5V~30V	3.3V~15V	8A	15mmX 15mmX6.6mm (BGA)	36VIN, 15VOUT, 8A, DC-DC power supply	LTM4613	ADI	
8	AST4616I	2.7V~5.5V	0.6V~5V	One-way 16A two-way 8A	15mmX 15mmX6.6mm (BGA)	Dual-channel, low-VIN input DC-DC power supply with 8A output per channel	LTM4616	ADI	
9	AST4618I	4.5V~26.5V	0.8V~5V	8A	9mmX 16mmX6.6mm (BGA)	6A DC-DC Power Supply with Tracking and Frequency Synchronization Functions	LTM4618	ADI	
10	AST4620I	4.5V~16V	0.6V~2.5V	One way 26A two way 13A	15mmX 15mmX6.6mm (BGA)	Dual channel 13A or single channel 26A DC/DC power supply	LTM4620	ADI	
11	AST4620xB	4.5V~16V	0.6V~2.5V	One way 26A two way 13A	15mmX 15mmX5.01mm (BGA)	Dual channel 13A or single channel 26A DC/DC power supply	LTM4620	ADI	
12	AST4622I	3.6V~20V	0.6V~5.5V	One-way 16A two-way 8A	7.5mmX8.0mmX5.1mm(BGA)	Dual channel 2.5A or single 5A buck DC/DC power supply.	LTM4622	ADI	
13	AST4627I	4.5V~20V	0.6V~5V	15A	15mmX 15mmX6.6mm (BGA)	15A, Single channel DC-DC power supply	LTM4627	ADI	
14	AST4628PI	4.5V~32V	0.6V~6.0V	One-way 16A two-way 8A	15mmX 15mmX6.6mm (BGA) 15mmX 15mmX6.0mm (LGA)	Dual channel 8A or single channel 16A DC/DC regulator	LTM4628	ADI	
15	AST4628xB	4.5V~26.5V	0.6V~5.5V	One-way 16A two-way 8A	15mmX 15mmX4.92mm (BGA)	Dual channel 8A or single channel 16A DC-DC power supply	LTM4628	ADI	
16	AST4630AI	4.5V~18V	0.6V~8V	One-way 36A two-way 18A	15mmX 15mmX6.6mm (BGA) 15mmX 15mmX6.0mm (LGA)	Dual channel 18A or single channel 36A DC/DC regulator	LTM4630A	ADI	Wide pressure model
17	AST4630xB	4.5V~16V	0.6V~5.3V	One-way 36A two-way 18A	16mmX 16mmX5.01mm (BGA) 16mmX 16mmX4.41mm (LGA)	Dual channel 18A or single channel 36A DC/DC regulator	LTM4630	ADI	
18	AST4633I	4.5V~16V	Vout1,2 0.8V-1.8V Vout3 0.8V-5.5V	One-way 16A two-way 8A	15mmX 15mmX6.6mm (BGA)	Three-output 10A buck DC-DC power supply	LTM4633	ADI	
19	AST4638I	3.1V~20V	0.6V~5.5V	15A	8mm×8mm×6.6mm (BGA)	20VIN, 15A buck DC/DC	LTM4638	ADI	
20	AST4643I	4V~20V	0.6V~3.3V	One-way 12a four-way 3A	16mmX 10mmX5.4mm (BGA)	Four-channel DC-DC power supply with 3A current per output.	LTM4643	ADI	
21	AST4643MB	4V~20V	0.6V~3.3V	One-way 12a four-way 3A	15mmX 9mmX2.5mm (BGA)	Four-channel DC-DC power supply with 3A current per output.	LTM4643	ADI	Ultra thin model
22	AST4644TI	4.5V~14V	0.6V~5.5V	One-way 16a four-way 4A	16mmX 10mmX5.4mm (BGA)	Four-channel DC-DC power supply with configurable 4A output array	LTM4644	ADI	
23	AST4644xB	4.5V~14V	0.6V~5.5V	One-way 16a four-way 4A	15mmX 9mmX5.01mm (BGA)	Four-channel DC-DC power supply with configurable 4A output array	LTM4644	ADI	
24	AST4644MBT	4.5V~14V	0.6V~5.5V	One-way 16a four-way 4A	15mmX 9mmX2.5mm (BGA)	Four-channel DC-DC power supply with configurable 4A output array	LTM4644	ADI	Ultra thin model
25	AST4650I	4.5V~16V	0.6V~1.8V	One-way 50A two-way 25A	15mmX 15mmX6.6mm (BGA) 15mmX 15mmX6.0mm (LGA)	Dual-channel 25A or single-channel 50A DC-DC power supply	LTM4650	ADI	
26	AST4650ACB	4.5V~16V	0.6V~5.5V	One-way 50A two-way 25A	16mmX 16mmX5.01mm (BGA)	Dual-channel 25A or single-channel 50A DC-DC power supply	LTM4650	ADI	Wide pressure model
27	AST4650xB	4.5V~16V	0.6V~1.8V	One-way 50A two-way 25A	16mmX 16mmX5.01mm (BGA)	Dual-channel 25A or single-channel 50A DC-DC power supply	LTM4650	ADI	
28	AST8027I	4.5V~60V	2.5V~24V	4A	15mmX 15mmX6.6mm (BGA)	Wide input voltage, up to 60V, 4A DC-DC power supply	LTM8027	ADI	
29	AST8052I	6V~36V	1.2V~24V	5A 2-Quadrant	11.25mm×15mm×6.6mm (BGA)	36VIN, 5A, two-quadrant CVCC buck DC-DC power supply	LTM8052	ADI	
30	AST8055I	5V~36V	1.2V~36V	Step up 3A step down 8.5A	15mmX 15mmX6.6mm (BGA)	36VIN, 8.5A buck-boost DC-DC power supply	LTM8055	ADI	
31	AST8056I	5V~58V	1.2V~48V	Step up 2A step down 5.4A	15mmX 15mmX6.6mm (BGA)	58VIN, 48VOUT buck-boost DC-DC power supply	LTM8056	ADI	
32	AST8023I	3.6V~36V	0.8V~10V	2A	9mmX11.25m X6.6mm (BGA)	2A, 36V buck DC-DC power supply	LTM8023	ADI	
33	AST8025I	3.6V~36V	0.8V~12V	3A	9mm × 15mm × 6.6mm(BGA)	36V, 3A buck DC-DC power supply	LTM8025	ADI	
34	AST8033I	3.6V~36V	0.8V~12V	3A	15mm×11.25mm×6.6mm (BGA)	Ultra-low noise, EMC-compliant 36VIN, 3A DC-DC power supply	LTM8033	ADI	
35	AST4700I	4.5V~16V	0.5V -1.8V	One-way 100A two-way 50A	22mmX 16.0mmX8.0mm (BGA)	Dual-channel 50A or single-channel 100A DC-DC power supply with digital power system management function.	LTM4700	ADI	
36	AST4626I	3.1V~20V	0.6V~5.5V	12A	11.25mm×15mm×6.6mm (BGA)	20VIN, 12A buck DC-DC power supply	LTM4626	ADI	
37	AST8026I	6V~36V	1.2V-24V	5A	15mm×11.25mm×6.6mm (BGA)	36VIN, 5A CVCC buck DC-DC power supply	LTM8026	ADI	

serial number	model	Input voltage (v)	Output voltage (v)	Output current (a)	Package size specification	main feature	Benchmark model	Benchmarking brand	remarks
1	AST1102	1.6V~5.5V	1.0~Vin-Vd	1A	DFN3*3-6	Output automatic discharge, adjustable output, minimum pressure difference of 180mV@1A.	/		
2	AST1103	4V~40V	0.6 ~ Vin-Vd	300mA	SOT23-5	Excellent load and linear adjustment rate, minimum pressure difference of 300 mv @ 0.3a.	/		
3	AST1107	0.8V~5.5V	0.8~Vin-Vd	500mA	DFN1.2 x1.2-6	Adjustable output, minimum pressure difference of 90mV@0.5A	/		
4	AST1112	1.5V~12V	0.8~Vin-Vd	1500mA	SOT-223-5	The output is adjustable, and the pressure difference is 350mV@1.5A	/		
5	AST7440I	1.1V~5.5V	0.8~3.6V	3A	VQFN-20	Adjustable output	TPS7440I	TI	
6	AST51200	2.5V/3.3V	ADJ	3A	DFN10	DDR terminal regulator	TPSS1200DRC	TI	
7	AST1117series	2.5V-20V	ADJ/1.5/2.5/3.3/5V	1A	SOT-223	Adjustable output, fixed 1.5V, 2.5V, 3.3V and 5V optional.	LT/LM/AMS1117	ADI	
8	AST1963series	2.5V-20V	ADJ/1.5/2.5/3.3V	1.5A	SOT-223/SOP8	Adjustable output, fixed 1.5V, 2.5V and 3.3V optional.	LT1963	ADI	
9	AST1763series	2.8V-20V	ADJ/1.8/3.3/5V	500mA	SOP8	Adjustable output, fixed 1.8V, 3.3V and 5V optional.	LT1763	ADI	
10	AST1764series	2.7V-20V	ADJ/1.8/3.3/5V	3A	TO-263	3A, adjustable output, fixed 1.8V, optional 3.3V	LT1764	ADI	
11	AST7151	4.5V-16V	1.5~5.1V	800MA	DFN8	Adjustable output, high power supply rejection ratio and low noise characteristics	ADM7151ACPZ	ADI	
12	AST7172	2.3~5.5V	1.2~6V	2A	DFN8	With adjustable output and low noise, it is very suitable for supplying power to high-performance analog circuits and mixed-signal circuits.	ADM7172ACPZ	ADI	
13	AST7155	2.3~6.6V	1.2~3.4V	600mA	DFN8	The output is adjustable, providing high power supply rejection ratio and low noise characteristics.	ADM7155	ADI	
14	AST767D3XX	2.8V-10V	ADJ/3.3V 1.8/3.3V 2.5/3.3V	1A/1A	eTSSOP28	Dual output, one with 3.3V, one with fixed 1.8V and 2.5V, or adjustable and optional.	TPS767D3XX	TI	
15	AST1964series	-3~ -20V	-5V -1.24~ -18V	200mA	DFN8	Negative pressure -5 fixed output can be adjusted with negative pressure output.	LT1964	ADI	
16	AST1175	-4.8~ -20V	-5V -3.8~ -18V	500mA	DFN8	Negative pressure -5 fixed output can be adjusted with negative pressure output.	LT1175	ADI	
17	AST717series	2.5~6.5V	ADJ/2.8V/3.3V	200mA	SOT23-5L /SC70-5(SOT353)	Ultra-high PSRR, excellent load response and linear response.	TPS717 series	TI	

serial number	model	Input voltage (v)	Output voltage (v)	Output current (a)	Package size specification	main feature	Benchmark model
1	AST2201	4~18	ADJ	16	QFN4x4-11	Short circuit protection, over-temperature protection	/
2	AST2202	4~28	ADJ	8	QFN3x3-12	Current limiting protection	/
3	AST2203	4.5~40	ADJ	3	TSOT23-8	Frequency adjustable	/
4	AST2205	4.5~18	ADJ	2	SOT23-6	Cycle-by-cycle term flow protection	/
5	AST2305	3-33	ADJ	4	DFN 3×3-10	Boost, internal soft start, over-temperature protection, etc.	/
6	AST2002C	2.7~5.5	ADJ	6	QFN2x2-10	Low on-resistance, over-temperature, over-voltage and short-circuit protection, etc.	/
7	AST2005	2.75~5.5	ADJ	4	QFN3*3-10	Low on resistance, integrated inductorShort circuit protection, over-temperature protection	/

02- MCU

serial number	model	basic frequency (MHz)	memory(KB)		IO interface	Communication interface					Clock			Ethernet interface	ADC (12bits) cell/channels	Supply voltage(V)	Packaging	Benchmark model	Benchmark brand
			Flash	RAM		I2C	SPI	U(S)ART	USB DEVICE	CAN 2.0B	16-bits Timer	Motor Control Timer (16 bits)	WDG/RTC						
1	AST32F031F6P	48	32	4	17	1	1	1	/	/	4	1	1	/	1/12	2.7-5.5	TSSOP20	STM32F031F6P	ST
2	AST32F031K6U	48	32	4	27	1	1	1	/	/	4	1	1	/	1/12	2.7-5.5	QFN32	STM32F031K6U	ST
3	AST32F103(A)KBU	72	128	20	18	2	2	3	1	1	4	1	2/1	/	2/16	2.7-5.5	QFN32	/	
4	AST32F103(A)CBT	72	128	20	37	2	2	3	1	1	4	1	2/1	/	2/16	2.7-5.5	LQFP48	STM32F103CBT	ST
5	AST32F103(A)RBT	72	128	20	51	2	2	3	1	1	4	1	2/1	/	2/16	2.7-5.5	LQFP64	STM32F103RBT	ST
6	AST32F103(A)VBT	72	128	20	80	2	2	3	1	1	4	1	2/1	/	2/16	2.7-5.5	LQFP100	STM32F103VBT	ST
7	AST32F103ZG	72	1024	96	112	2	3	5	1	1	10	1	2/1	/	3/16	2.7-5.5	LQFP144	STM32F103ZGT	ST
8	AST32F107VCx	72	1024	128	80	2	3	5	1	2	6	2	2/1	1	3/16	2.7-3.6	LQFP/BGA100	STM32F107VC	ST
9	AST32F403RGT	200	1024	128	51	3	4	5	1	1	10	2	2/1	/	3/16	2.7-3.6	LQFP64	/	
10	AST32F403VGT	200	1024	128	80	3	4	5	1	1	10	2	2/1	/	3/16	2.7-3.6	LQFP100	/	
11	AST32F407A series	168	3072	196	140	3	3	6	2	2	10	2	2/1	1	3/24	2.7-3.6	LQFP64/100 /144/176	STM32F407XXX	ST
12	AST1451 (8 bits MCU)	72	64	4	29	1	1	2	/	/	7	1	1	/	2/20	2.7-3.6	QFN32	EFM8LB12F64E-B-QFN32	Silicon Labs

03- ADC&DAC

serial number	product model	product category	Product description	Reference model (ADI)	Package type	remarks
1	ASTA7822	ADC	Single channel, 8-bit, 2 MSPS, CMOS 3V/5V ADC	AD7822BRUZ	TSSOP-20	
2	ASTA9204	ADC	10-bit, 80 MSPS, 1.8 V, Dual Analog -to-Digital Converter	AD9204BCPZ -20	QFN-64	
3	ASTA9231	ADC	12-bit, 80 MSPS, 1.8V Dual Channel ADC	AD9231BCPZ -80	QFN-64	
4	ASTA9251	ADC	14-bit, 80 MSPS, 1.8 V, Dual Analog -to-Digital Converter	AD9251BCPZ -20	QFN-64	
5	ASTA9633	ADC	12 bit, 110 MSPS, serial LVDS 1.8V quad ADC	AD9633BCPZ -110	QFN-48	
6	ASTA9253	ADC	14-bit, 110 MSPS, serial LVDS, 1.8 V, Quad ADC	AD9253BCPZ -110	QFN-48	
7	ASTA9235	ADC	12-bit, 65 MSPS, 3 V ADC	AD9235BCPZ -65	QFN-32	
8	ASTA9268	ADC	16-bit, 125MSPS, 1.8 V, Dual Analog-to-Digital Converter	AD9268BCPZ -125	QFN-64	
9	ASTA10D1500	ADC	10-bit, Dual 1.5GSPS or Single 3.0GSPS ADC	ADC10D1500CIUT /NOPB	HLQFP-144	
10	ASTA7893	ADC	12-bit, true bipolar input, single supply, serial 6 μs ADC in 8-pin package	AD7893BRZ -10	SOIC-8	In research
11	ASTA8509	ADC	16-bit 250kSPS SAR ADC	ADS8509	SOIC-20	
12	ASTA7606	ADC	8-channel DAS with 16 bit, 200 kSPS bipolar input and synchronous sampling ADC	AD7606BSTZ	LQFP-64	
13	ASTA7793	ADC	24-bit, 3-channel, low noise, low power consumption, on-chip instrumentation amplifier and reference, σ-8 ADC.	AD7793BRUZ	TSSOP-16	
14	ASTA1258	ADC	24-bit 125kps16 channel δ-σ ADC with fast channel scanning and automatic sequencer	ADS1258	VQFN-48	
15	ASTA7173	ADC	24-bit, low power consumption, 8/16 channels, 31.25 kSPS, highly integrated Σ-ADC	AD7173-8BCPZ	QFN-40	
16	ASTAD2S1210	RDC	Variable resolution, 16-bit R/D converter with built-in reference oscillator	AD2S1210BSTZ	LQFP-48	
17	ASTD7541	DAC	12-bit, CMOS, multiplying DAC	AD7541AKNZ	PDIP-18	
18	ASTD7547	DAC	12-bit, CMOS, Dual Channel DAC with Parallel Load Input Structure	AD7547LRZ	SOIC-24	
19	ASTD7533	DAC	10-bit, CMOS, low cost, multiplying DAC	AD7533KRZ	SOIC-16	
20	ASTD9747	DAC	Dual channel, 16-Bit, 250 MSPS digital-to-analog converter (DAC)	AD9747	QFN-72	
21	ASTD9746	DAC	Dual-channel, 14-bit, 250 MSPS DAC	AD9746	QFN-72	
22	ASTD9783	DAC	Dual channel, 16-bit, LVDS interface, 500mspdac	AD9783	QFN-72	
23	ASTA9208	ADC	14-Bit, 3 GSPS, JESD204B, Dual Analog -to-Digital Converter	AD9208	BP-196-4	Sample

model	VS (V)	Reference input number	Product description	Number of output paths	On-chip VCO or NCO	Maximum output	Output level	Control mode	encapsulation	Benchmark model (TI)	condition
ASTS04828	3.3	3	High-performance clock regulator, supporting JEDEC JESD204B. Not limited to the application of JESD204B, all 14 outputs can be independently configured as the output of traditional high-performance clock system.	14	YES	3200	LVC MOS, LVDS, CML LVPECL	SPI	QFN64	LMK04828	Mass production

04-MEMERY

serial number	product category	model	joggle/interface	supply voltage	capacity	package	Benchmark model	Benchmarking brand	remarks
1	Nor Flash	AST25QW128S	SPI	1.65~3.6V	128Mb	SOP8 (mil208)	W25Q128J	WINBOND	
2		AST25QW256S			256Mb	SOP8 (mil208)	W25Q256J	WINBOND	
3		AST25QL128S	SPI	1.8V	128Mb	SOP8 (mil208)	MT25QU128	micron	
4		AST25QL256S			256Mb	SOP8 (mil208)	MT25QU256	micron	
5		AST25QL512S			512Mb	SOP16 (mil300)	MT25QU512	micron	In research
6		AST29GL256Px	BPI	3.3V	256Mb	BGA64/TSOP56	S29GL256P	CYPRESS	
7		AST29GL512Px			512Mb	BGA64/TSOP56	S29GL512P	CYPRESS	
8		AST29GL01GPx			1024Mb	BGA64/TSOP56	S29GL01GP	CYPRESS	
9	EEPROM	AST24C04CS	I2C	1.7~5.5V	4Kb	SOP8	AT24C04C/M24C04 24AA04/CAT24C04	MICROCHIP/ST ON	
10		AST24C64DS			64Kb	SOP8	AT24C64D/M24C64 24AA64/CAT24C64	MICROCHIP/ST ON	
11		AST24C256CS			256Kb	SOP8	AT24C256C/M24C256 24AA256/CAT24C256	MICROCHIP/ST ON	
12		AST24C512CS			512Kb	SOP8	AT24C512C/M24C512 24AA512/CAT24C512	MICROCHIP/ST ON	
13		AST24CM02S			2Mb	SOP8	AT24CM02/M24CM02 24AA512/CAT24C512	MICROCHIP/ST ON	
14	EEPROM	AST25C128S	SPI	1.7~5.5V	128K	SOP8	AT25128B-SSLH	MICROCHIP	
15	DDR3	AST41J128M16P	/	1.5V	2Gb	FPGA96	MT41J128M16 series	micron	
16	DDR3L	AST41K512M16P	/	1.35/1.5V	8Gb	FPGA96	MT41K512M16HA-125	micron	

05-OPERATIONAL AMPLIFIER

serial number	product model	category	the key technical indexes	Replacement model/company	Column 1
1	ASTW8138	Fully differential amplifier	Differential amplifier, low distortion, 1 amplifier, 3.5mV, 1.005dB, 320MHz	AD8138/ADI	batch
2	ASTW4120	Fully differential amplifier	+5V, fully differential input/output, 100MHz bandwidth, rail-to-rail output.	THS4120/TI	batch
3	ASTW356	High speed operational amplifier	+5V single channel, 500MHz bandwidth, 360V/us slew rate, rail-to-rail output.	OPA356/TI ADA4891-1/ADI	batch
4	ASTW8015	trans impedance amplifier	+3.3V, single channel, 200MHz bandwidth, smoke input/differential output.	MAX40660/MAXIM AD8015/ADI	batch
5	ASTW40662	trans impedance amplifier	+3.3V quad, 200MHz bandwidth, single-ended input/differential output.	MAX40662/MAXIM	In research
6	ASTW8605	Precision operational amplifier	Single channel, 10MHz bandwidth, 90uV input offset voltage, rail-to-rail I/O	AD8605/ADI	In research
7	ASTW8606	Precision operational amplifier	Dual channel, 10MHz bandwidth, 90uV input offset voltage, rail-to-rail I/O	AD8606/ADI	In research
8	ASTW340	Low noise operational amplifier	+5V, single channel, 8MHz bandwidth, 6.5nV/VHz output noise voltage, rail-to-rail I/O.	OPA340/TI	In research
9	ASTW2340	Low noise operational amplifier	+5V, dual channel, 8MHz bandwidth, 6.5nV/VHz output noise voltage, rail-to-rail I/O.	OPA2340/TI	batch
10	ASTW350	Low noise operational amplifier	Single, 38 MHz, 22 V/s, 2.7 V to 5.5V single supply rail-to-rail operational amplifier	OPA350/TI	batch
11	ASTW2350	Low noise operational amplifier	Dual Channel, 38 MHz, 22 V/s, 2.7 V to 5.5V Single Supply Rail-to-Rail Operational Amplifier	OPA2350/TI	batch
12	ASTW4350	Low noise operational amplifier	Quad, 38 MHz, 22 V/s, 2.7 V to 5.5V single supply rail-to-rail operational amplifier	OPA4350/TI	batch
13	ASTW1005	trans impedance amplifier	+3.3V, sixteen channels, 200MHz single-ended input/differential output.	/	In research
14	ASTK701	High speed analog switch	+5V, SPDT, 100MHz bandwidth, rail-to-rail I/O	ADG701/ADI	batch
15	ASTK719	High speed analog switch	+5V, SPDT, 100MHz bandwidth, rail-to-rail I/O	ADG719/ADI	batch
16	ASTK704	High speed analog switch	+5V, one out of four, 100MHz bandwidth, rail-to-rail I/O	ADG704/ADI	batch

serial number	model	product name	operating voltage (V)	Data transmission rate (Mbps)	package	Compatible model/company				
1	AST3232AE	RS-232 signal transceiver circuit	3~5.5	0.12	SOP16	MAX3232ESE/MAXIM				
2	AST3485PAS	RS-485 422 signal transceiver circuit	3.3	10	SOP8	MAX3485ESA/MAXIM				
3	AST3490PAS	RS-422-485 High Speed Serial Bus Circuit	3.3	10	SOP8	MAX3490ESA/MAXIM				
4	AST3030PAS	RS-422 signal four-way transmitter chip	3.3	20	SOP16	MAX3030EESA/MAXIM				
5	AST3096PAS	RS-422 signal four-way receiver chip	3.3	10	SOP16	MAX3096CSE/MAXIM				
6	AST488PAS	RS-485-422 Signal Transceiver Circuit	5	0.25	SOP8	MAX488ESA/MAXIM				
7	AST490PAS	RS-422-485 Signal Transceiver Circuit	5	2.5	SOP8	MAX490ESA/MAXIM				
serial number	model	product name	A-port voltage (V) Input voltage	A port signal	B port voltage (V) Output voltage	B port signal	Maximum data transmission delay (ns)	package	Compatible model/company	Operating temperature (°C)
1	AST4T245AP	4-bit bidirectional voltage converter circuit	1.2~3.6	single end	1.2~3.6	single end	8.9	TSOP16	SN74AVC4T245/TI	-55~125/-40~125
2	AST8T245LP	8-bit bidirectional voltage converter circuit	1.65~5.5	single end	1.65~5.5	single end	11.1	TSSOP24	SN74LVC8T245/TI	-55~125/-40~125
3	AST16T245LP	16-bit dual power bus transceiver circuit	1.65~5.5	single end	1.65~5.5	single end	6.7	CSOP48	SN74AVC16T245/TI	-55~125/-40~125
4	AST0102S	2-bit bidirectional open drain level shifter	1.65~3.6	single end	2.3~5.5	single end	5.8	SOP8	TXS0102/TI	-55~125/-40~125
5	AST0104S	4-Bit Bidirectional Open Drain Level Converter	1.65~3.6	single end	2.3~5.5	single end	5.8	SOP14	TXS0104/TI	-55~125/-40~125
6	AST0108S	8-bit bidirectional level shifter circuit 4-bit bidirectional voltage converter circuit	1.2~3.6	single end	1.65~5.5	single end	9.9	TSSOP20	TXS0108PWR/TI	-55~125/-40~125












serial number	product category	product model	Product description	Supply voltage (V)	Communication rate (Mbps)	package	Compatible model/company	Operating temperature (°C)	
1	CAN bus drive	AST65HVD230	Low-voltage CAN bus transceiver, providing differential transmission and differential reception capabilities.	3.0~3.6	1	SOP8	SN65HVD230/TI	-55~125/-40~125	
2	CAN bus drive	AST1050PAS	It is the controller and object of CAN protocol. Manage the interface between buses. Provide differential transmission for the bus. Ability and provide differential receiving ability for CAN controller.	4.5~5.5, 3V compatible	1	SOP8	TJA1050T/NXP	-55~125	
3	CAN bus drive	AST1040PAS	Compared with 1050, it has standby mode and supports remote wake-up.	4.5~5.5, 3V compatible	1	SOP8	TJA1040T/NXP	-55~125	
4	PHY chip	AST88E1111B	Single channel Gigabit Ethernet transceiver	2.5V/1.1V	1000	BGA117	88E1111/Marvell	-40~85	
5	PHY chip	AST8211	Single port Gigabit Ethernet transceiver	3.3V	1000	QFN 48	RTL8211FS	-40~85	
serial number	product category	product model	Product description	Supply voltage (v)	Watchdog period	Reset threshold voltage	package	Compatible model/company	Operating temperature (°C)
1	Monitoring circuit	AST706T	It is used to monitor the 3V power supply in the 3V ~ 5V microprocessor system, and provides functions such as reset and watchdog.	3.14~5.5	1.6S	3.08	SOP8	MAX706TESA /MAXIM	-55~125
2		AST708S	It is used to monitor the 3V power supply in the 3V ~ 5V microprocessor system and provide reset and reset output at the same time.	2.95~5.5	1.6S	2.93	SOP8	MAX708SESA /MAXIM	-55~125
serial number	product category	product model	Product description	Supply voltage (v)	Input bias voltage	Maximum output current	package	Compatible model/company	Operating temperature (°C)
1	Current sensor	ASTH6107	Multifunctional high-end current detection amplifier	2.7~5.5	400uV	1mA	TSOT-23-5	LT6107MPSS/ADI	-55~125

serial number	product name	Yachuang model	Compatible with ADI	Compatible ti	Compatible with Silicon labs	Package size
1	4-channel digital isolator	ASTG1400	ADuM1400	ISO7740	Si8640	WB SOIC-16 10.2 x 7.5 x 2.5(mm)
			ADuM2400	ISO7340		
			ADuM3400	ISO7840		
			ADuM4400	ISO7240		
			ADuM140	ISO6740		
2		ASTG1402	ADuM1402	ISO7742DW	Si8642	WB SOIC-16 10.2 x 7.5 x 2.5(mm)
			ADuM2402	ISO7342		
			ADuM3402	ISO7842		
			ADuM3442	ISO7242		
			ADuM242	ISO6742		
3	Dual-channel digital isolator	ASTG1200	ADuM1200	ISO7720D	Si8620	NB SOIC-8 4.9 x 3.9 x 1.8(mm)
			ADuM120	ISO7320CD	Si8423	
			ADuM7240	ISO7420ED		
			ADuM1280	ISO7220CD		
4		ASTG1201	ADuM1201	ISO7721	Si8622	NB SOIC-8 4.9 x 3.9 x 1.8(mm)
			ADuM3201	ISO7321	Si8422	
			ADuM7241	ISO7221		
			ADuM1281	ISO7421		
			ADuM1286	ISO7221		
5		Isolated operational amplifier	ASTG1300		AMC1300	

08-NETWORK TRANSFORMER

serial number	product name	model	LxWxH(mm)	Foot number	Working temperature	characteristic	Replacement model	Replace brand
1	Network transformer	QSNH7018I	13.7x12.2x6.3	24	-40~ 85°C	One-word ten trillion	H7018NL	Mips
2	Network transformer	QSTG2412I	18.1x12.2x6.5	24	-40~ 85°C	One-word ten trillion	HN265NL	Mips
3	Network transformer	QSNH5400I	28.45x17.28x11.18	96	-40~ 85°C	Quad gigabit	HX5400NL	Mips
4	Network transformer	QSNH5401I	28.45x17.28x11.18	96	-40~ 85°C	Quad gigabit	HX5401NL	Mips
5	Network transformer	QSNH5200I	14.73x17.27x10.67	48	-40~ 85°C	Dual-port gigabit	HX5200NL	Mips
6	Network transformer	QSNH5201I	14.73x17.27x11.18	48	-40~ 85°C	Dual-port gigabit	HX5201NL	Mips
7	Network transformer	QSNH5020I	27.94x7.54x8.64	50	-40~ 85°C	Dual-port gigabit	HX5020NL /749020022A	Pusi /WE
8	Network transformer	QSNH5120I	16.51x9.65x2.08	24	-40~ 85°C	Single-port gigabit	HX5120NL /749020111A	Pusi /WE
9	Network transformer	QSNH0069I	16.51x9.65x2.08	24	-40~ 85°C	Single-port gigabit	NA0069RMLF	Bohan
10	Network transformer	QSNH5008I	13.2x18.6x6.1	24	-40~ 85°C	Single-port gigabit	HX5008NL	Mips
11	Network transformer	QSNH5004I	17.53x16x5.51	24	-40~ 85°C	Single-port gigabit	HX5004NL	Mips
12	Network transformer	QSNM3295	15.1x10x4	24	-40~ 85°C	Single-port gigabit	M3295NL /749020023A	MHPC/WE
13	Network transformer	QSNH5084I	15.24x10.3x4.14	24	-40~ 85°C	Single-port gigabit	HX5084NL	Mips
14	Network transformer	QSNH5009I	13.8x15.24x5.84	24	-40~ 85°C	Single-port gigabit	HX5009NL	Mips
15	Network transformer	QSNM5009	15.1x10x4	24	-40~ 85°C	Single-port gigabit	GST5009MA HR682480E	Bo Han Han ren
16	Network transformer	QSNM2410I	13.05x14.8x3.7	24	-40~ 85°C	Single-port gigabit	G2410PR	MENTECH
17	Network transformer	QSNM2405I	17.8x16x3.3	24	-40~ 85°C	Single-port gigabit	HY682405	Hanren
18	Network transformer	QSNM001I	13.16x18.67x6.12	24	-40~ 85°C	Single-port gigabit	TG1G-E001NY	HALO
19	Network transformer	QSNM2001F/X	17.53x16x5.51	24	-40~ 85°C	Single-port gigabit	HX5007NL	Mips
20	Network transformer	QSNM1188	12.7x9.6x6	16	-40~ 85°C	One-mouthed and hundreds of megabytes	HX1188NL /H1102NL /HR641680E	Pusi/Hanren
21	Network transformer	QSNM0068AI	12.7x9.6x2.2	16	-40~ 85°C	One-mouthed and hundreds of megabytes	HX0068ANL	Mips
22	Network transformer	QSNM1094I	12.83x9.53x6.22	16	-40~ 85°C	T1/E1	T1094	Mips
23	Network transformer	QSNM00-0027	21.6x16.3x13.8		-40~ 85°C	Single-port 100M RJ45	JX00-0027NL	Mips
24	Network transformer	QSNM0-0136	16.8x3.9x33		-40~ 85°C	Single-port gigabit RJ45	JXK0-0136NL	Mips
26	Network transformer	QSNM0-0015	21.35x15.9x13.65		-40~ 85°C	Single-port gigabit RJ45	JXD0-0015NL	Mips
25	Network transformer	QSNM1A-0001	21.7x17.35x34.8		-40~ 85°C	Single-port 10 Gigabit RJ45+POE	JX1A-0001ZHL	Mips
27	Network transformer	QSNM8-1002	31.2x13.6x21.2		-40~ 85°C	Dual-port Gigabit RJ45	JXR8-1002NL	Mips
28	Network transformer	QSNM0-0017	59.7x13.6x30.5		-20~ 85°C	Quad Gigabit RJ45	JX0N-0017NL	Mips
29	Network transformer	QSNM5012I	27.8x15.4x7.24	48	-40~ 85°C	Dual port +POE	HX5012	Mips
30	Network transformer	QSNM6101I	27.8x15.4x7.24	48	-40~ 85°C	Dual port +POE	HX6101	Mips

09-RF TRANSFORMER

product model	Typical dimensions and outline drawings	Frequency range (MHz)	Insertion loss (dB)	Phase balance (degree)	amplitude balance (dB)	Impedance ratio	Input impedance (ω)	Corresponding to the model of mini-circuits company
QS+3:12RTC1-1TI		0.4-500	≤3.0	≤5.0	≤0.6	1:1	50	TC1-1T+
QSRTC2-1TI		3-300MHz	≤1.0	≤4.0	≤0.5	2:1	50	TC2-1T+
QSRTC4-1TI		0.5-300MHz	≤2.0	-	-	4:1	50	TC4-1T+
QSRTC4-1WI		3-800MHz	≤3.0	-	-	4:1	50	TC4-1W+
QSRTC1-1-13MI		4.5-3000MHz	≤3.0	≤20	≤3.8	1:1	50	TC1-1-13M+
QSRTC4-19I		10-1900	≤3.0	≤6	≤0.5	4:1	50	TC4-19+
QSRTC4-19I		10-1900	≤3.0	≤6	≤0.5	4:1	50	TCM4-19
QSRTC1-1-43XI		650-4000	≤2.0	≤4	≤0.5	1:1	50	TC1-1-43X+
QSRTC2-33I		30-3000	≤3.0	-	-	2:1	50	TCM2-33
QSRADT1-1WTI		0.4-800	≤3.0	≤4.0	≤0.5	1:1	75	ADT1-1WT
QSRTC4-63AXI		10-6000	≤3.5	-	-	1:1	50	TC1-1-63X+

10-WAVE FILTER

high-pass filter

serial number	type	Product model 2	Insertion loss (dB)	standing-wave ratio	Corresponding to the imported model of mini-circuits company
1	high-pass filter	QSHF440-3216	<1.5	<2.0	HFCN-440 (+)
2	high-pass filter	QSHF650-3216	<1.5	<2.0	HFCN-650 (+)
3	high-pass filter	QSHF740-3216	<1.5	<2.0	HFCN-740 (+)
4	high-pass filter	QSHF880-3216	<1.5	<2.0	HFCN-880 (+)
5	high-pass filter	QSHF1200-3216	<1.5	<2.0	HFCN-1200 (+)
6	high-pass filter	QSHF1760-3216	<1.5	<2.0	HFCN-1760 (+)
7	high-pass filter	QSHF1810-3216	<1.5	<2.0	HFCN-1810(+)
8	high-pass filter	QSHF1910-3216	<1.5	<2.0	HFCN-1910(+)
9	high-pass filter	QSHF2000-3216	<1.5	<2.0	HFCN-2000 (+)
10	high-pass filter	QSHF2100-3216	<1.5	<2.0	HFCN-2100 (+)
11	high-pass filter	QSHF2700-3216	<1.5	<1.5	HFCN-2700 (+)
12	high-pass filter	QSHF2700A-3216	<1.5	<1.5	HFCN-2700A (+)
13	high-pass filter	QSHF3100-3216	<2.0	<2.0	HFCN-3100 (+)
14	high-pass filter	QSHF3500-3216	<2.0	<2.0	HFCN-3500 (+)
15	high-pass filter	QSHF3800-3216	<2.0	<2.0	HFCN-3800 (+)
16	high-pass filter	QSHF4400-3216	<2.0	<2.0	HFCN-4400 (+)
17	high-pass filter	QSHF5500-3216	<2.0	<2.0	HFCN-5500 (+)
18	high-pass filter	QSHF8400-3216	<2.0	<2.0	HFCN-8400 (+)

lowpass

serial number	product model	Nominal frequency (MHz)	Insertion loss (dB)	standing-wave ratio	Corresponding to the model of mini-circuits company
1	QSLF80-3216	80	1.5	1.8	LFCN-80(+)
2	QSLF95-3216	95	1.5	1.8	LFCN-95(+)
3	QSLF105-3216	105	1.5	1.8	LFCN-105(+)
4	QSLF120-3216	120	1.5	1.8	LFCN-120(+)
5	QSLF160-3216	160	1.5	1.8	LFCN-160(+)
6	QSLF180-3216	180	1.5	1.8	LFCN-180(+)
7	QSLF190-3216	190	1.5	1.8	LFCN-190(+)
8	QSLF225-3216	225	1.5	1.8	LFCN-225(+)
9	QSLF320-3216	320	1.2	1.8	LFCN-320(+)
10	QSLF400-3216	400	1.2	1.8	LFCN-400(+)
11	QSLF490-3216	490	1.2	1.8	LFCN-490(+)
12	QSLF530-3216	530	1.2	1.8	LFCN-530(+)
13	QSLF575-3216	575	1.2	1.8	LFCN-575(+)
14	QSLF630-3216	630	1.2	1.8	LFCN-630(+)
15	QSLF800-3216	800	1.2	1.8	LFCN-800(+)
16	QSLF900-3216	900	1.2	1.8	LFCN-900(+)
17	QSLF1000-3216	1000	1.2	1.8	LFCN-1000(+)
18	QSLF1200-3216	1200	1.2	1.8	LFCN-1200(+)
19	QSLF1325-3216	1325	1.2	1.8	LFCN-1325(+)
20	QSLF1400-3216	1400	1.2	1.8	LFCN-1400(+)
21	QSLF1450-3216	1450	1.2	1.8	LFCN-1450(+)
22	QSLF1500-3216	1500	1.2	1.8	LFCN-1500(+)
23	QSLF1525-3216	1525	1.2	1.8	LFCN-1525(+)
24	QSLF1575-3216	1575	1.2	1.8	LFCN-1575(+)
25	QSLF1700-3216	1700	1.2	1.8	LFCN-1700(+)
26	QSLF1800-3216	1800	1.2	1.8	LFCN-1800(+)
27	QSLF2000-3216	2000	1.2	1.8	LFCN-2000(+)
28	QSLF2250-3216	2250	1.2	1.8	LFCN-2250(+)
29	QSLF2400-3216	2400	1.2	1.8	LFCN-2400(+)
30	QSLF2500-3216	2500	1.2	1.8	LFCN-2500(+)
31	QSLF2600-3216	2600	1.2	1.8	LFCN-2600(+)
32	QSLF2750-3216	2750	1.2	1.8	LFCN-2750(+)
33	QSLF2850-3216	2850	1.2	1.8	LFCN-2850(+)
34	QSLF3000-3216	3000	1.5	1.8	LFCN-3000(+)
35	QSLF3400-3216	3400	1.5	1.8	LFCN-3400(+)
36	QSLF3800-3216	3800	1.5	1.8	LFCN-3800(+)
37	QSLF4400-3216	4400	1.5	1.8	LFCN-4400(+)
38	QSLF5000-3216	5000	1.5	1.8	LFCN-5000(+)
39	QSLF5500-3216	5500	1.5	1.8	LFCN-5500(+)
40	QSLF5850-3216	5850	1.5	1.8	LFCN-5850(+)
41	QSLF6000-3216	6000	1.5	1.8	LFCN-6000(+)
42	QSLF6400-3216	6400	1.5	1.8	LFCN-6400(+)
43	QSLF6700-3216	6700	1.5	1.8	LFCN-6700(+)
44	QSLF7200-3216	7200	1.5	1.8	LFCN-7200(+)
45	QSLF8400-3216	8400	1.5	1.8	LFCN-8400(+)
46	QSLF9170-3216	9170	1.5	2.0	LFCN-9170(+)
47	QSLF12000-3216	12000	2.5	2.3	LFCN-12000(+)

Bandpass filter

serial number	product model	Nominal frequency (MHz)	Insertion loss (dB)	standing-wave ratio	Stop band loss (dB)
1	QSBF46-20-9860	36.29-56.75	≤3.5	<2.0	≥25@26.06MHz ≥25@66.98MHz
2	QSBF140-20-9050	130-150	≤6.5	<2.0	≥30@115MHz ≥30@175MHz
3	QSBF140-60-9050	110-170	≤4.0	<2.0	≥25@80MHz ≥25@200MHz
4	QSBF170-60-4842	130-200	≤3.5	<2.0	≥25@100 MHz ≥25@280 MHz
5	QSBF300-90-9050	255-345	≤3.5	<2.0	≥52@(at 520-900MHz) ≥40@(at 900-2000MHz)
6	QSBF750-120-7032	690-810	≤3.5	<2.0	≥50(at 100 MHz) ≥30(at 500 MHz) ≥30(at 1000 MHz) ≥50(at 1400 MHz) ≥45(at 2600 MHz)
7	QSBF900-400-4532	700-1100	≤3.0	<2.0	≥25@DC-500 MHz ≥25@1300 MHz
8	QSBF925-350-4532	750-1100	≤3.0	<2.0	≥25@550MHz ≥25@1500-2000 MHz
9	QSBF1092-264-5048-2	960-1224	≤3.5	<2.0	≥40(at DC 800 MHz) ≥40(at 1400-2000 MHz)
10	QSBF1100-300-4842	950-1250	≤3.0	<2.0	≥30@DC-600 MHz ≥25@1600-3500 MHz
11	QSBF1300-200-4842	1200-1400	≤4.0	<2.0	≥25@980 MHz ≥25@1500-2000 MHz
12	QSBF1800-90-4835	1755-1845	≤3.5	<2.0	≥55@(at 1200MHz ± 45 MHz) ≥50@(at 2400MHz ± 45 MHz) ≥45@(at 3600MHz ± 90 MHz)
13	QSBF1850-100-9642	1750-1950	≤6.5	<2.5	≥50(at 1100 MHz) ≥14(at 1700 MHz) ≥14(at 2000 MHz) ≥50(at 2600 MHz)
14	QSBF2360-720-4534	2000-2720	≤3.0	<2.0	≥25@1640MHz ≥25@3080MHz

11-DIVIDER

Power divider/combiner

serial number	product model	Frequency range (MHz)	Isolation (dB)	Insertion loss (dB)	Phase balance (degree)	Amplitude balance (dB)	voltage standing wave ratio	craft	Input power (w)	Input/output impedance (ω)	Corresponding to the model of mini-circuits company
1	QSSCN-2-35	2825-3700	≥10	≤4.3	≤4.0	≤0.3	≤2.0	LTCC	≤3	50	SCN-2-35+
2	QSSCN-2-19	1425-1900	≥10	≤4.0	≤4.0	≤0.4	≤2.0	LTCC	≤3	50	SCN-2-19+
3	QSSCN-2-11	800-1175	≥10	≤4.0	≤3.0	≤0.3	≤2.0	LTCC	≤3	50	SCN-2-11+
4	QSSCN-2-15	1100-1450	≥10	≤4.0	≤4.0	≤0.3	≤2.0	LTCC	≤3	50	SCN-2-15+
5	QSADP-2-1	0.5-400	≥20	≤1.0	≤3.0	≤0.4	≤1.3	wind thread in	≤0.5	50	ADP-2-1+
6	QSADP-2-1W	1-650	≥20	≤1.0	≤3.0	≤0.4	≤1.8	wind thread in	≤2	50	ADP-2-1W+
7	QSADP-2-4	10-1000	≥14	≤1.5	≤5.0	≤0.4	≤1.7	wind thread in	≤1.0	50	ADP-2-4
8	QSADP-2-10	5-1000	≥15	≤1.2	≤3.0	≤0.3	≤1.7	wind thread in	≤0.5	50	ADP-2-10+
9	QSADP-2-20	20-2000	≥15	≤1.5	≤5.0	≤0.7	≤2.0	wind thread in	≤1.0	50	ADP-2-20+
10	QSRPS-2-30	10-3000	≥9	≤2.5	≤6.0	≤1.5	≤2.0	wind thread in	≤0.5	50	RPS-2-30+
11	QSSBTC-2-10L	5-1000	≥16	≤1.4	≤6.0	≤0.6	≤1.5	wind thread in	≤0.5	50	SBTC-2-10L+
12	QSSBTC-2-20L	200-2000	≥15	≤2.2	≤10.0	≤0.6	≤2.0	wind thread in	≤0.6	50	SBTC-2-20L+
13	QSTCP-2-10	5-1000	≥16	≤1.4	≤6.0	≤0.6	≤1.8	wind thread in	≤0.5	50	TCP-2-10
14	QSTCP-2-25	200-2500	≥15	≤1.7	—	—	≤2.7	wind thread in	≤0.5	50	TCP-2-25
15	QSJPS-3-1	5-300	≥20	≤1.4	—	—	≤2.0	wind thread in	≤1.0	50	JPS-3-1
16	QSJPS-3-1W	50-750	≥17	≤1.4	—	—	≤2.0	wind thread in	≤1.0	50	JPS-3-1W
17	QSSCP-5-1	2-200	≥20	≤1.5	—	—	≤1.6	wind thread in	≤1.0	50	SCP-5-1
18	QSSCA-4-10	5-1000	≥13	≤2.5	—	—	≤2.0	wind thread in	≤0.5	50	SCA-4-10

12-RF MICROWAVE

1. Low noise amplifier

Model	frequency range(GHz)	Gain(dB)	Gain flatness(dB)	noise coefficient (Typ.dB)	P-1dB (dBm)	Input/output return loss (dB)	supply electricity (V/mA)	packaging
QSAM0003A-C4	0.1-3.5	30.5	±0.75	0.6	18	17/19	5/80	QFN4X4
QSAM0003B-C4	0.1-3.5	30.5	±1.0	0.8	18.5	18/21	5/75	QFN4X4
QSAM0018D-C3	0.1-18	14	±2.0	2.5	16	20/15	5/35	QFN3X3
QSAM003025D-C4	0.3-2.5	18	±4.0	0.6	17	12/16	5/55	QFN4X4
QSAM0003C-C4	0.3-3.5	30.5	±0.5	0.8	18	17/15	5/80	QFN4X4
QSAM008016A-C4	0.8-1.6	35	±0.75	0.4	13	11/17	5/45	QFN4X4
QSAM0109A-C4	1/9	27.5	±0.5	0.9	13.5	11/17	5/64	QFN4X4
QSAM0109B-C4	1/9	24.5	±0.75	1	14.5	19/13	5/50	QFN4X4
QSAM0112E-C4	1/12	16.5	±1.25	1.6	18.5	13/13	5/40	QFN4X4
QSAM0118C-C4	1/18	14.5	±0.75	2.2	17	14/14	5/45	QFN4X4
QSAM0204A-C4	2/4	27.5	±0.5	0.8	11	17/15	5/33	QFN4X4
QSAM0204C-C4	2/4	30.5	±0.5	0.5	7.5	18/17	5/20	QFN4X4
QSAM0206A-C4	2/6	26.5	±1.0	0.8	12	12/22	5/33	QFN4X4
QSAM0208A-C4	2/8	14	±0.5	2.6	16.5	16/13	5/55	QFN4X4
QSAM025035-C4	2.5-3.5	33.5	±0.5	0.7	12.5	14/14	5/40	QFN4X4
QSAM0408B-C4	4/8	27.5	±0.5	0.8	12.5	19/19	5/35	QFN4X4
QSAM0408C-C4	4/8	30	±0.5	1	7.5	16/20	5/20	QFN4X4
QSAM0514A-C4	5/14	22	±1.1	1.1	7.5	13/14	3.3/20	QFN4X4
QSAM0618E-C4	6/18	19	±1.3	1.8	16.5	16/14	5/85	QFN4X4
QSAM0618E-C4	6/18	19.5	±0.75	1.8	17	17/15	5/85	QFN4X4
QSAM0618F-C4	6/18	19.5	±1.5	1.9	17	12/17	3.5/100	QFN4X4
QSAM0713C-C4	7/13	22	±0.6	1.4	18.5	15/21	5/90	QFN4X4
QSAM1020C-C4	10/20	24	±0.5	1.6	0.5	11/14	5/10	QFN4X4

2. High linearity and low noise amplifier

Model	frequency range(GHz)	Gain(dB)	Gain flatness(dB)	noise coefficient (Typ.dB)	P-1dB (dBm)	OIP3 (dBm)	Input/output return loss(dB)	supply electricity(V/mA)	packaging
QSAM9037-C3	0.05-6	25	-	0.65	20	35	11/13	5/70	QFN3X3
QSAM010A-CX	0.1-3	23	±3.5	1	17	34	12/10	3/55	MICRO-X

3. Limiting low noise amplifier

Model	frequency range(GHz)	Gain(dB)	Gain flatness (dB)	noise coefficient (Typ.dB)	P-1dB (dBm)	Psat (dBm)	Input/output return loss(dB)	supply electricity(V/mA)	packaging
IILNA-0003C-C5	0.3-3.5	30.5	±0.75	0.9	17.5	18.5	16/15	5/75	QFN5X5

4. Gain module amplifier

Model	frequency range(GHz)	Gain(dB)	noise coefficient (Typ.dB)	P-1 (dBm)	Input/output return loss (dB)	supply electricity (mA)	packaging
QSAM001B-C3	0.1-8	11.5	4.5	11	24/23	40	QFN3X3
QSAM002B-C3	DC-6	15.5	3.2	12	21/22	40	QFN3X3
QSAM003B-C3	DC-3	20	5.1	11	16/16	35	QFN3X3
QSAM004B-C3	DC-4	14	4	15.5	23/22	62	QFN3X3
QSAM005B-C3	DC-4	19	2.8	16.5	26/20	65	QFN3X3
QSAM013B-C3	DC-6	14.5	4.1	14.5	21/23	50	QFN3X3
QSAM014B-C3	DC-3.5	17.5	4.7	22	11/13	85	QFN3X3
QSAM030B-C3	DC-4	18	0.9	19.5	17/16	85	QFN3X3
QSAM030C-C3	0.1-4	15	1.3	20	20/19	80	QFN3X3
QSAM030F-C3	0.1-4	16	1	19	18/17	55	QFN3X3
QSAM030G-C3	0.1-4	16	1.6	20	22/18	60	QFN3X3
QSAM050B-C3	0.1-2	22.5	0.7	18	16/13	75	QFN3X3
QSAM062A-C3	0.01-2	30	1.4	10.5	17/17	35	QFN3X3
QSAM003B-CX	DC-3	20	5	11.5	17/14	35	MICRO-X
QSAM004B-CX	DC-4	13	4.5	15.5	22/19	65	MICRO-X
QSAM005B-CX	0.1-4	20	3	16	20/20	65	MICRO-X
QSAM010C-CX	0.1-7	16.5	4.7	15	19/18	55	MICRO-X
QSAM013B-CX	0.1-6	14.5	4.2	14	20/24	53	MICRO-X
QSAM014B-CX	0.1-3.5	20	5	22.5	11/13	75	MICRO-X
QSAM016C-CX	0.1-3	13	6.5	6.5	13/13	20	MICRO-X
QSAM016D-CX	0.1-6	11.5	6	6	14/14	20	MICRO-X
QSAM030B-CX	0.1-4	17	1.1	19.5	17/15	90	MICRO-X
QSAM030E-CX	0.01-3.5	26	1.3	20	10/11	80	MICRO-X
QSAM030F-CX	DC-4	16	1	18.5	14/17	55	MICRO-X
QSAM040E-CX	0.01-3.5	26	1.3	20	10/11	80	MICRO-X
QSAM050A-CX	0.05-1	21	0.9	14.5	7/14	20	MICRO-X

5. GaN power amplifier

Model	frequency range(GHz)	Gain(dB)	Gain flatness (dB)	Psat (dBm)	PAE (%)	Input/output return loss(dB)	supply electricity (V/mA)	packaging
QSAM0713-P45A-C6	7/13	12.5	±0.9	44.5	35	12/14	28/900	CFP6

6. Driving amplifier

Model	frequency range(GHz)	Gain (dB)	Gain flatness (dB)	P-1 (dBm)	Psat (dBm)	Input/output return loss(dB)	supply electricity (V/mA)	packaging
QSAM0013B-C5	DC-13	18	±2.5	25	26	21/21	8/300	QFN5X5
QSAM0204A-C5	2.6-4.2	26.5	±1.8	22.5	23.5	13/18	5/140	QFN5X5
QSAM0206A-C5	2/6	23	±0.75	23.5	24.5	10/15	5/200	QFN5X5
QSAM0220C-C5	2/20	11.5	±1.5	23	24	14/13	8/190	QFN5X5
QSAM0220D-C5	2/20	12	±1.0	23	24	14/17	8/185	QFN5X5
QSAM0618D-C5	6/18	21	±1.5	24	25	12/14	5/220	QFN5X5
QSAM0420F-C4	4/20	24	±1.8	20	21	14/15	5/160	QFN4X4
QSAM0520E-C4	5/20	20.5	±3.75	20	21	16/17	5/130	QFN4X4
QSAM0618B-C4	6/18	8.5	±0.5	19	20	15/13	5/80	QFN4X4
QSAM0618-22-C4	6/18	17.5	±2.0	20	20.5	10/15	5/130	QFN4X4
QSAM0620C-C3	6/20	13.5	±1.25	19	20	14/16	5/115	QFN3X3

7. power amplifier

Model	frequency range(GHz)	Gain(dB)	Gain flatness (dB)	P-1 (dBm)	Psat (dBm)	Input/output return loss(dB)	supply electricity (V/mA)	packaging
QSAM00802A-C5	0.8-2	31	±2.0	29	30	13/16	8/215	QFN5X5
QSAM0206B-C5	2/6	19	±1.0	31	31	9/22	8/365	QFN5X5
QSAM0812F-C5	8/12	23.5	±1.6	33.5	34	11/16	8/550	CFP6
QSAM1314-1B-C6	13.5-14.5	18.5	±1.4	31	32	8/22	7/480	CFP6

8. Numerical control attenuator

Model	frequency range(GHz)	digit capacity (bit)	range of attenuation(dB)	Insertion loss (dB)	return loss (dB)	Attenuation accuracy(dB)	Additional phase shift(o)	packaging
QSDA0007-1A-C3	DC-7	1	32	2	20	1	3	QFN3X3
QSDA00101D-C4	DC-10	1	0-31.5	1.8	18	±0.6	<-5 ~ +5	QFN4X4
QSDA00085B-PD-C3	0.1-8	5	0.25-7.75	1	19	±0.4	±8.0	QFN3X3
QSDA00185B-PD-C4	0.01-18	5	0.5-15.5	2.6	15	0.4(RMS)	1(RMS)	QFN4X4
QSDA0012-5A-C5	0.01-12	5	31st-January	3.2	17	±0.5	0.5(RMS)	QFN5X5
QSDA00046W-PD-C4	0.1-4	6	0.5-31.5	2	23	±1.0	±12	QFN4X4
QSDA00126C-PD-C5	DC-12	6	0.5-31.5	3.5	19	-0.3 ~ +1.1	2.3	QFN5X5
QSDA0012-6E-PD-C5	DC-12	6	0.5-31.5	3.5	19	0.4(RMS)	1.2(RMS)	QFN5X5
QSDA0108-6E-PD-C4	1/8	6	0.5-31.5	2.3	19	±0.5	±2.5	QFN4X4
QSDA00127C-PD-C5	DC-12	7	0.5-31.75	3.5	19	0.4(RMS)	0.7(RMS)	QFN5X5

9. GaAs fixed attenuator

Model	frequency range(GHz)	decrement (dB)	Attenuation accuracy(dB)	Withstandpower (dBm)	return loss (dB)	packaging
QSFA03-CX	DC-10	3	±0.60	27	20	MICRO-X

10. VVA

Model	frequency range(GHz)	range of attenuation(dB)	Insertion loss(dB)	return loss(dB)	IIP3(dBm)	packaging
QSVA0004C-C4	DC-4	0-24	2.5	15/15	35	QFN4X4
QSVA0020C-C4	DC-20	0-26	3	17	35	QFN4X4

11. GaAs broadband monolithic VCO

Model	frequency range(GHz)	phase noise@ 100k(dBc/Hz)	output rating (dBm)	Tuning voltage(V)	operating voltage(V)	electric current (mA)	Second harmonic (dBc)	packaging
QSV00205-C4	2.5-5	-105	14	0~20V	5	60	-15	QFN4X4
QSV00307-C4	3.5-7	-101	15	0~20V	5	70	-15	QFN4X4
QSV00408-C4	4/8	-98	13	0~20V	5	50	-15	QFN4X4
QSV00918-C4	9/18	-90	6	0~24V	5	70	-12	QFN4X4
QSV01020-C4	10/20	-90	4.5	0~16V	5	70	-12	QFN4X4
QSV01218-C4	12/18	-90	3	0~20V	5	60	-12	QFN4X4

12. Equalizer

Model	frequency range(GHz)	Insertion loss (dB)	Equilibriumrange (dB)	Input/output return loss(dB)	packaging
QSEQ001024-C3	0.1-2	1.5	4	20/20	QFN3X3
QSEQ001026-C3	0.1-2	1.6	6	20/20	QFN3X3
QSEQ001028-C3	0.1-2	1.6	8	20/20	QFN3X3
QSEQ01034-C3	1/3	0.6	4	24/24	QFN3X3
QSEQ01124-C3	1/12	0.9	4	20/20	QFN3X3

13. GaAs limiter

Model	frequency range(GHz)	Insertion loss (dB)	limiting level (dBm)	Maximum input power (dBm)	packaging
QSLM0004A-C4	0.5- 4	0.6	13	40 (CW)	QFN4X4
QSLM0004B-C4	0.5- 4	0.35	13	45 (CW)	QFN4X4
QSLM0004C-C4	0.5- 4	0.5	15	43 (CW)	QFN4X4
QSLM0004D-C4	0.5- 4	0.6	15	47 (CW)	QFN4X4
QSLM0006D-C3	0.05-6	0.3	17	33(CW)	QFN3X3
QSLM0006D-C4	0.05-6	0.3	30	33 (CW)	QFN4X4
QSLM0012B-C4	DC-12	0.5	17	39 (CW)	QFN4X4
QSLM0014A-C4	DC-14	0.5	16	37(CW)	QFN4X4
QSLM0408B-C4	4/8	0.8	16	42(CW)	QFN4X4

14. Filter

model	Type	frequencyrange (GHz)	Passband loss (dB)	Out of band attenuation(dBc)	return loss (dB)	packaging
QSFL1.5-C4	low-pass	DC-1.5	2.5	≥30dB@2.6GHz ≥40dB@2.8GHz	≤20	QFN4X4
QSFL2-C4	low-pass	DC-2	1.9	≥30dB@3.3GHz	≤20	QFN4X4
QSFL3.5-C5	low-pass	DC-3.5	2	≥30dB@5.3GHz ≥40dB@5.7GHz	≤20	QFN5X5
QSFL10-C4	low-pass	DC-10	2.5	≥30dB@14.2GHz ≥40dB@15~20GHz	≤20	QFN4X4

15. Mixer

model	RF/LO frequencyrange (GHz)	IF frequency range (GHz)	conversion loss (dB)	LO-RF insulation (dB)	LO-IF insulation (dB)	RF-IF insulation (dB)	Local oscillator power (dBm)	packaging
QSMX0206-C4	2/6	DC-2.5	7.5	47	39	19	+13~+15	QFN4x4
QSMX0222A-C4	2/22	DC-3.5	9	51	33	33	+11~+15	QFN4x4
QSMX0408A-C4	4/8	DC-4	7	42	44	28	+11~+15	QFN4x4
QSMX0614-C3	6/14	DC-5	7	38	31	18	+11~+15	QFN3x3

16. Directional coupler

model	frequency range(GHz)	wastage (dB)	couplingfactor (dB)	Coupling flatness (dB)	return loss (dB)	packaging
QSDC020620-C5	2/6	0.4	20	4.4	23	QFN5X5
QSDC021615-C5	2/16	1.5	15	5	17	QFN5X5

17. Power divider








model	function	frequencyrange (GHz)	Insertion loss (dB)	Insertion loss flatness (dB)	Input-output return loss (dB)	insulation (dB)	packaging
QSPD00502A-C4	2 Power Separation	0.5-2	1	±0.3	20/18	18	QFN4X4
QSPD0103A-C4	2 Power Separation	1/3	0.9	±0.3	16/17	19	QFN4X4
QSPD0103A-C5	2 Power Separation	1/3	0.9	±0.3	16/17	19	QFN5X5
QSPD0109B-C5	2 Power Separation	1/9	1.5	±0.2	19/18	24	QFN5X5
QSPD0206-C3	2 Power Separation	2/6	0.9	±0.2	20/22	25	QFN3X3
QSPD0206-C4	2 Power Separation	2/6	1	±0.2	22/22	24	QFN4X4
QSPD0206B-C4	2 Power Separation	2/6	1.2	±0.35	15/15	23	QFN4X4
QSPD0412-C4	2 Power Separation	4/12	1.2	±0.15	15/16	18	QFN4X4

18. FET switch

model	type	frequencyrange (GHz)	Insertion loss (dB)	insulation (dB)	Input-output return loss (dB)	P-1 (dBm)	switching time (ns)	Control level(V)	packaging
QSSW00125FC4	SPST	DC-12	1.8	61	20/19	23	10	0/-5	QFN4X4
QSSW0018A5FC4	SPST	DC-18	2	63	15/16	23	10	0/-5	QFN4X4
QSSW00245FC3	SPST	DC-24	2.1	54	19/20	23	10	0/-5	QFN3X3
QSSW00255FPD-C3	SPST	DC-25	1.5	48	18/18	26	20	0/+5	QFN3X3
QSSW0006DT-C4	SPDT	DC-6	1.3	56	22/23	33	10	0/-5	QFN4X4
QSSW0006ADT-PD-C4	SPDT	DC-6	0.5	42	20/20	30	20	0/+5	QFN4X4
QSSW0008DT-PD-C4	SPDT	DC-8	0.5	40	20/20	28	20	0/+5	QFN4X4
QSSW0009DT-H-C3	SPDT	DC-9	1	47	22/21	41	-	0/-5	QFN3X3
QSSW0012DT-C4	SPDT	DC-12	1.5	48	18/23	23	10	0/-5	QFN4X4
QSSW0012DT-PD-C4	SPDT	DC-12	1.5	53	17/17	22	30	0/+5	QFN4X4
QSSW0015DT-PD-C4	SPDT	DC-15	1.3	51	20/18	22	30	0/+5	QFN4X4
QSSW00084T-C4	SP4T	DC-8	2	50	15/15	23	10	0/-5	QFN4X4
QSSW00144T-PD-C4	SP4T	DC-14	1.7	49	18/17	21	30	0/+5	QFN4X4

13-ISOLATE POWER SUPPLY










AC-DC isolated power supply module

serial number	series	Input voltage range	Output voltage	power range	Reference size	Reference picture
1	QSA20U/25U	85-265VAC	5V/12V/15V/24V/ ±5V/±12V/±15V	20W	70x48x23.5mm	
2	QSA25U	165-265VAC	5V/12V/15V/24V/ ±5V/±12V/±15V	25W	70x48x23.5mm	
3	QSA40	90-264VAC	5V/12V/15V/24V/ ±5V/±12V/±15V	40W	63.5x89x25mm	
4	QSA60	90-264VAC	5V/12V/15V/24V	60W	58.5x109x30mm	
5	QSA50/100	90-264VAC 176-264VAC	5V/12V/15V/24V/ 36V/48V	50 100W	120x52x26mm	
6	QSA300F	175-275VAC	5V/12V/15V/24V/ 28V/48V	300W	116.8x61x13.5	
7	QSA1500PZ 220S28J	176-264VAC	28VDC/54A	1500W	300x220x36mm	


Low power isolated power supply module

serial number	series	Input voltage range	Output voltage	power range	Reference size	Reference picture
1	QSD01AL	4.5~9V/8-18V/18-36V/36-72V	3.3V/5V/9V/12V/15V ±5/±12V/±15V	1W	22x9.6x12mm	
2	QSD01AL	10.8~13.2V(12V)	3.3V/5V/9V/12V/15V	1W	22x9.6x12mm	
3	QSD03AL	4.5~9V/8-18V/18-36V/36-72V 9-18V/9~36V	3.3V/5V/9V/12V/15V ±5/±12V/±15V	3W	22x9.6x12mm	
4	QSD01AA	(4.5-5.5)/(10.8-13.2)/(21.6-26.4)V	5V/9V/12V/15V/24V	1W	11.6x6.1x10.2mm	
5	QSD01AA	(4.5-5.5)/(10.8-13.2)/(21.6-26.4)V	±5/±9/±12V/±15V	1W	19.7x6.1x10.18mm	
6	QSD02AA	13.5~16.5V(15V) 21.6~26.4V(24V)	3.3V/5V/9V/12V/15V ±5/±12V/±15V	2W	19.7x7.1x10.18mm	
7	QSD06A	18-36V/36-72V	±5/±12V/±15V	6W	31.75x20.32x11.2mm	






DC-DC power [3W-1500W] isolated power supply module

serial number	series	Input voltage range	Output voltage	power range	Reference size	Reference picture
1	QSD03AB/05AB	9-36V/18-36V 36-72V/18-72V	3.3V/5V/12V/15V/ 24V/28V	3W/5W	12.7x12.7x11.7	
2	QSD10AB/15AB /20AB	9-36V/18-36V	3.3V/5V/12V/15V/ ±5V/±12V/±15V	10W/15W /20W	12.7x25.4x11.7	
3	QSD10B/20B /25B/30B	9-36V/18-36V	5V/12V/15V/24V/ 36V/48V	5-30W	25.4x25.4x11.7	
4	QSD30C/40C /50C/60C	9-36V/18-36V	5V/12V/15V/24V/ 36V/48V	30-60W	25.4x50.8x11.2	
5	QSD50Q/70Q /100Q	9-36V/18-36V	5V/12V/15V/24V/ 36V/48V	50-100W	36.8x57.9x13.5mm	
6	QSD50H/100H /150H/200H	9-36V/18-36V 200-400V	5V/12V/15V/24V/ 36V/48V	50-200W	61.0x57.9x13.5mm	
7	QSD300F/400F/600F	9-36V/18-36V	24V/48V/110V	300-600W	86x146x16mm	
8	QSD400N	65-150V/82-180V/200-400V	12V/15V/24V/28V/48V	400W	86x83x14.7mm	
9	QSD600P/1200P	18-36V/36-72V	24V/48V	600W 1200W	116.84x61.0x12.7mm	

Compatible with CALEX semi-brick products [500W] isolated power module

serial number	series	Input voltage range	Output voltage	power range	Reference size	Reference picture
1	QS24S12	9-36V	12V/28V	500W	63.5x61x13.2mm	

Isolate power module compatible with Synqor brick product

serial number	series	Input voltage range	Output voltage	power range	Reference size	Reference picture
1	QSDV	9-36V/36-75V 180-400V 400-650V	55V/12V/15V/24V/ 28V/48V	30-90W	1/16 brick	
2	QSDV	9-36V/36-75V 180-400V 400-650V	5V/12V/15V/24V/ 28V/48V	85-150W	1/8 brick	
3	QSDV	9-36V/36-75V 180-400V 400-650V	5V/12V/15V/24V/ 28V/48V	100-360W	1/4 brick	
4	QSDV	9-36V/36-75V 180-400V 400-650V	5V/12V/15V/24V/ 28V/48V	300-500W	half-brick	
5	QSDV	36-75V 180-400V 400-650V	5V/12V/15V/24V/ 28V/48V	700-1200W	whole-brick	

1. Schottky rectifier diode

serial number	mode	IO (A)	VRRM (V)	appearance	Replacement model
1	NIU2DK010 ~ 020	≤0.02	40 ~ 45	DO-35/LL-35	
2	NIU2DK010 ~ 180	≤1.0	30 ~ 80	DO-35/DO-41/LL-35/LL-41	
3	NIUBAT46	0.25	100	DO-35	
4	NIU1N5817 ~ NIU1N5819	1	20 ~ 40	DO-41/DO-214AC	
5	NIUSR102 ~ NIUSR120	1	20 ~ 200		
6	NIUSK12 ~ 110	1	20 ~ 100	DO-41/DO-214AC	
7	NIUSS12 ~ 115	1	20 ~ 150	DO-214AC	
8	NIUBAT54	0.1	30	SOT-23/SOD-123/SOD-323/SOD-523	
9	NIU2AB1 NIU2AB1A	0.02	15 ~ 30	DO-41	
10	NIU2AB5	0.9	40	DO-35	
11	NIUSR202 ~ 2A0	2	20 ~ 100		
12	NIUSR2150	2	150	DO-15/DO-214AA	
13	NIUSR2200	2	200		
14	NIUSK225 NIUSS22 ~ 215	2	20 ~ 150		
15	NIUSS32-320	3	20 ~ 200	DO-201AD/DO-214AA/DO-214AB	
16	NIUSR302 ~ 3200	3	20 ~ 200	DO-201AD/DO-214AA/DO-214AB	
17	NIUNA03HSA12	3	120	SMA-1	
18	NIU1N5820 ~ NIU1N5822 NIUSR502-5100	5	20 ~ 40	DO-201AD/DO-214AA/DO-214AB	
19		5	20-100		
20	NIUTW1U31	16	100	TO-257	
21	NIUTW1U32	8	100	SMD-1	
22	NIU12CWQ10FN	12	100	D-PAK	
23	NIU2DK680 ~ 6200	6	80 ~ 200	TO-257	
24	NIU2DK860 ~ 8150	8	60 ~ 150	TO-257	
25	NIU2DK1040 ~ 10200	10	40 ~ 200	TO-257	

2. Detection diode and switching diode

serial number	mode	IO (mA)	VB (V)	appearance	Replacement model
1	NIU2AP1 ~ 15	2.5 ~ 90	10 ~ 100	DO-35/DO-41	
2	NIU2AP16 ~ 17	10 ~ 30	50 ~ 100		
3	NIU2AP21	50	7		
4	NIU2AP27/NIU2AP27A	2 ~ 10	150	DO-35	
5	NIU2AP30A ~ E	2	10		
6	NIU2AP31A ~ B	2	10		
7	NIU2AK1 ~ 20	--	30 ~ 70	DO-35	

3.High speed switching rectifiers

serial number	mode	IO (mA)	VB (V)	appearance	Replacement model
1	NIU2CK70A ~ F	10			
2	NIU2CK71A ~ F	20	30 ~ 105	DO-35/MINI -MELF	
3	NIU2CK72A ~ F	30			
4	NIU2CK73A ~ F	50			
5	NIU2CK74A ~ F	100	30 ~ 105	DO-35/MINI -MELF	
6	NIU2CK75A ~ F	150			
7	NIU2CK20	50	50	DO-35/ MINI-MELF	
8	NIUBAV17 -99	100	25-250	DO-35/ MINI-MELF	
9	NIUBAW56 BAL99	10	100	SOT -23	
10	NIU2CK76A ~ F	200			
11	NIU2CK77A ~ F	260	30 ~ 105	DO-35/MINI -MELF	
12	NIU2CK78A ~ F	270			
13	NIU2CK79A ~ F	280			
14	NIU2CK80A ~ F	300	30 ~ 105	DO-35/MINI -MELF	
15	NIU2CK81A ~ F	320			
16	NIU2CK82A ~ F	10	30 ~ 90		
17	NIU2CK83A ~ F	10	30 ~ 90	DO-35/MINI -MELF	
18	NIU2CK84A ~ F	50	45 ~ 240		
19	NIU2CK85A ~ E	100	45 ~ 105	DO-35	
20	NIU2CK86	10	30	DO-35	
21	NIU2CK200 ~ 201	100	45 ~ 105	DO-35	
22	NIU1SS81 ~ 83	100	200 ~ 300	DO-35/MINI -MELF	
23	NIU2CK48 ~ 56	10 ~ 500	40 ~ 250	DO-35	
24	NIUBAS21H	200	200	SOD-323	
25	NIUBAS32L	100	100	MINI-MELF	
26	NIU1N4448 ~ 4454 NIU1N5711	10 ~ 600	50 ~ 100	DO-35/MINI -MELF/SOD -123	
27	NIU(2CK)1N4148 ~ 4154	0.1 ~ 50	35 ~ 100	DO-35/MINI -MELF	
28	NIU1N914 ~ 1N917	10 ~ 50	30 ~ 100	DO-35	

4. Silicon rectifier diode

serial number	mode	IO (A)	VRRM (V)	appearance	Replacement model
1	NIU2GS101 ~ 1010	0.1			
2	NIU2GS151 ~ 1510	0.15			
3	NIU2GS201 ~ 2010	0.2	100~ 1000	SOD-M/SOD-N	
4	NIU2GS251 ~ 2510	0.25			
5	NIU2CZ101B ~ M	0.3	50~ 1000	D2-10A	
6	NIU2CZ102B ~ M	0.5			
7	NIU2CZ103B ~ M	1	50~ 1000	D2-10A	
8	NIU2CZ32B ~ M	1.5	50~ 1000	D2-10B	
9	NIU2CZ50A ~ Q	0.03	25~ 1600	DO-35/D2-10A	
10	NIU2CZ51A ~ Q	0.05	25~ 1600	DO-35/D2-10A	
11	NIU2CZ52A ~ Q	0.1	25~ 1600	DO-35/D2-10A	
12	NIU2CZ53A ~ Q	0.3	25~ 1600	DO-35	
13				D2- 10A/DO- 214AC/DO-214BA	
14	NIU2CZ54A ~ Q	0.5	25~ 1600	DO-35	
15				D2- 10A/DO- 214AC/DO-214BA	
16	NIU2CZ55A ~ Q	1	25~ 1600	D2- 10A/DO- 214AC/DO-214BA	
17	NIU2CZ56A ~ Q	3	25~ 1600	D2-10B/TO- 257	
18	NIUBY251 ~ 255		200~ 1300	D2 -10B/TO-257/DO- 201AD	
19	NIU2CZ57A ~ Q	5	25~ 1600	SOD-Q/DO -201AD/P600	
20	NIUBYM56A ~ E		200~ 1000		
21	NIU2CZ80A ~ Q	0.03	25~ 1600	DO-35/D2-10A	
22	NIU2CZ81A ~ Q	0.05	25~ 1600	DO-35/D2-10A	
23	NIU2CZ82A ~ Q	0.1	25~ 1600	DO-35/D2-10A	
24	NIU2CZ83A ~ Q	0.3	25~ 1600	DO-35	
25				D2- 10A/DO- 214AC/DO-214BA	
26	NIU2CZ84A ~ Q	0.5	25~ 1600	D2- 10A/DO- 214AC/DO-214BA	
27	NIU2CZ85A ~ Q	1	25~ 1600	D2- 10A/DO- 214AC/DO-214BA	
28	NIU2CZ86A ~ Q	3	25~ 1600	D2-10B/TO- 257	
29	NIU2CZ87A ~ Q	5	25~ 1600	SOD-Q/DO -201AD/P600	
30	NIU2CP12	0.1	100	DO-35/D2-10A	
31	NIU1N5500 ~ 1N5506	5	50~ 600	SOD-Q/DO -201AD/P600	
32	NIUBZ03B ~ M	0.3	50~ 1000	D2-10A	
33	NIUBZ05B ~ M	0.5			
34	NIUBZ1B ~ M	1	50~ 1000	D2-10A	
35	NIUBZ15B ~ M	1.5	50~ 1000	D2-10B	
36	NIU1N4001 ~ 4007	1	50~ 1000	D2- 10A/DO- 41/DO-214AC	
37	NIU1N5062	1	800	D2-10A	
38	NIU1N3595	0.2	150	DO-35/LL-35	
39	NIUS1A-S1Y	1	50~ 2000	DO-214AC/DO -214BA	
40	NIU1N5201 ~ 5208	2	100~ 1000	D2-10B/DO -15	
41	NIU2CZ4001 ~ 4007	1	50~ 1000	D2- 10A/DO- 41/DO-214AC	
42	NIU1N5391 ~ 5399	1.5	50~ 1000	D2-10B/DO -15/DO -214AC/DO- 214BA	
43	NIURL201 ~ 207	2	50~ 1000	D2-10B/DO -15	
44	NIUZ9F102	2	1500	D2-10B	
45	NIUS2A ~ S2M	1.5	50~ 1000	DO- 214AA	
46	NIUS3A ~ S3M	3	50~ 1000	DO -214AB	
47	NIUBZ2B ~ M	2		D2-10B	
48	NIUBZ3B ~ M	3	50~ 1000	D2-10B/TO- 257	
49	NIU1N5400 ~ 5408	3		D2- 10B/DO- 201AD/DO- 214AB/ITO- 220AB/TO-257	
50	NIUBZ4B ~ M	4	50~ 1000	D2-10B/ITO -220AB/TO -257/SOD -Q	
51	NIU2CZ117B ~ M	5	50~ 1000	SOD -Q/P600/TO-257	
52	NIUBZ5B ~ M	5	50~ 1000	SOD -Q/TO-257	
53	NIU6A05 ~ 6A10	6	50~ 1000	SOD -Q/P600/SMC/TO-257	

5. Silicon fast recovery rectifier diode

serial number	mode	IO (A)	VRRM (V)	trr (ns)	appearance	Replacement model
1	NIUBYV26A ~ G	1	200~1400	100~150	D2-10A	
2	NIUBYV27A ~ H	2	50~600	50~100	D2-10B	
3	NIUBV36A ~ E	1	200~1000	100~150	D2-10A	
4	NIUBYV95-0 ~ 4	1	600~1000	250~300	D2-10A	
5	NIUBYV96A ~ E	3	200~1000	250~300	D2-10B/TO-257	
6	NIUBYW72 ~ 76	3	200~600	200	D2-10B/TO-257	
7	NIUBYW95A ~ E	3	200~1000	250~300	D2-10B/TO-257	
8	NIUBYW82 ~ 86	3	200~1000	4000		
9	NIUBYW178	3	800	60	D2-10B/TO-257	
10	NIUBYV28-50~600	3.5	50~600	100~150		
11	NIUBYV228	5	1500	300		
12	NIUGUF10A ~ Q	1	50~1200	50~75	DO-41	
13	NIURGP02-12E~20E	0.1	1200~2000	300		
14	NIURGP10A ~ M	1	50~1000	200~500		
15	NIU2CZP10A ~ 10M	1	50~1000	200~500	DO-41	
16	NIUGP08A ~ J	0.8	50~600	2000	DO-41	
17	NIUGP10A ~ N	1	50~2000	2000		
18	NIUEU1GGR ~ NIUEU2JGF	1	100~600	50~75		
19	NIURU1DGF	1	600	75		
20	NIUSF4004GP	1	400	50		
21	NIUGUF02-12E~20E	0.25	1200~2000	75		
22	NIUGUF02-16D~20D	0.5	1600~2000	75	DO-15	
23	NIUGUF15A ~ M	1.5	50~1000	50~75		
24	NIUGUF20A ~ M	2	50~1000	50~75		
25	NIURU2GGF ~ RU2KGF	1~1.5	400~800	50	DO-15	
26	NIURGP15A ~ M	1.5	50~1000	50		
27	NIURGP20A ~ M	2	50~1000	80		
28	NIUGP15A ~ M	2	50~1000	50		
29	NIUGP20A ~ M	2	50~1000	2500	DO-15	
30	NIU1S15GGR	2	1000	2500		
31	NIUERB12JGP	2	600	2500		
32	NIURH1JGR	1.5	600	250		
33	NIURU3BGF	1.5	100	50		
34	NIUTVR4J ~ M	1.5	600~1000	1000		
35	NIUGUF30A ~ M	3	50~1000	50~75	DO-201AD/TO-257	
36	NIURU4AGF ~ RU4JGF	3.5	50~600	50~75	DO-201AD/TO-257	
37	NIURGP25A ~ M	2.5	50~1000	150~500	DO-201AD	
38	NIURGP30A ~ M	3	50~1000	150~500	DO-201AD/TO-257	
39	NIUGP30A ~ Y		50~1600	3000		
40	NIU2CZ104B ~ M	0.3	50~1000	2000	D2-10A	
41	NIUMC8936	0.3	500	100	D2-10A	
42	NIU2CZ028	0.1	50	4	DO-35	
43	NIU2CZ105B ~ M	0.5	50~1000	2000	D2-10A	
44	NIU2CZ106B ~ M	1	50~1000	3000		
45	NIU2CZ023B-K	1	50~800	200	D2-10A	
46	NIU2CZ34E	1	300	400		
47	NIUBZG03B ~ M	0.3	50~1000	2000	D2-10A	
48	NIUBZG05B ~ M	0.5	50~1000	2000	D2-10A	
49	NIUBZG1B ~ M	1	50~1000	3000	D2-10A	
50	NIUA114F ~ M	2	50~600	300	D2-10B	
51	NIUA115F ~ M	5		400	SOD-Q/TO-257	
52	NIU2CZ001 ~ 007	1	50~1000	150~500	D2-10A/DO-41/	
53	NIU2CZ024	0.5	2000	150	DO-214AC/DO-214BA	
54	NIU1N5615-5623	1	200~1000	150~500	D2-10A	
55	NIU1N6628	1.2/4	600	30	D2-10A	
56	NIUFR101 ~ 107	1	50~1000	150~500	D2-10A/DO-41/DO-214AC/DO-214BA	
57	NIUES1A ~ NIUES1M	1	50~600	35	DO-214AC	

serial number	mode	IO (A)	VRRM (V)	trr (ns)	appearance	Replacement model
58	NIUES2A ~ NIUES2D	2	50~200	35	DO-214AA	
59	NIU1N4933 ~ 4937	1	50~600	200	DO-41/D2-10A	
60	NIU1N4942 ~ 4948	1	200~1000	150~500	DO-41/D2-10A	
61	NIU2CZ125 ~ 126	6	200~600	35~40	ITO-220AC(AB)/TO-220AB/TO-257	
62	NIUHER101 ~ 110	1	50~1000	50~75	DO-41/D2-10A/DO-214AC	
63	NIUMUR105 ~ 160	1	50~600	75	DO-41	
64	NIUUF100 ~ 110	1	50~1000	50~75	DO-41/D2-10A	
65					/DO-214AC/GF1	
66	NIU2CN3B ~ K	1	50~800	2000	D2-10A	
67	NIU2CZ020	5	500	100	SOD-Q/TO-257	
68	NIU2CZ121P	1	1500	100	D2-10A	
69	NIU2CN4B ~ K	1.5	50~800	1000	D2-10B	
70	NIUBZU1B ~ K	1	50~800	2000	D2-10A	
71	NIUBZU15B ~ K	1.5	50~800	1000	D2-10B	
72	NIUFR151 ~ 157	1.5	50~1000	150~500	D2-10B/DO-15	
73	NIUHER151 ~ 1510			50~75		
74	NIUBZG2B ~ M	2	50~1000	1000	D2-10B	
75	NIUFR201 ~ 207	2	50~1000	150~500	D2-10B/DO-15	
76	NIUFR251 ~ 257	2.5				
77	NIUHER201 ~ 2010	2	50~1000	50~75	D2-10B/DO-15 D2-10B	
78	NIU1N5804 ~ 5806	2.5	100~150	25		
79	NIUUF150 ~ 1510	1.5	50~1000	50~75	D2-10B/DO-15	
80	NIUUF200 ~ 2010	2	50~1000	50~75	D2-10B/DO-15 D2-10B	
81	NIU2CZ5804 ~ 5806	2.5	100~150	25		
82	NIUBZG3B ~ M	3	50~1000	1000	SOD-Q/D2-10B/TO-257	
83	NIUBZG4B ~ M	4				
84	NIUFR301 ~ 307		50~1000	150~500	D2-10B/DO-201AD/TO-257	
85	NIUBYM36A-E	3	50~1000	100~150	D2-10B/DO-201AD	
86	NIU1N5415 ~ 5420		50~600	150~400	D2-10B/TO-257	
87	NIUHER301 ~ 3010	3	50~1000	50~75	D2-10B/DO-201AD/TO-257	
88	NIU1N5811	4	150	50	D2-10B	
89	NIUUF5400 ~ 5408	3	50~1000	50~75	TO-257	
90	NIU1N5625	3.5	400	5000	D2-10B/TO-257	
91	NIU1N5551 ~ 5552	3	400~600	2000	D2-10B/TO-257	
92	NIUUF301 ~ 3010	3	50~1000	50~75	D2-10B/DO-201AD/TO-257	
93	NIU2CZ5811	3	150	50	D2-10B	
94	NIU2CZ5625	3.5	400	5000	D2-10B/TO-257	
95	NIUBY228 ~ NIUBY328	3	1500	2000 500	SOD-Q/TO-257	
96	NIUMUR405 ~ NIUMUR460	4	50~600	25~50	DO-201AD/P600	
97	NIUBZG5B ~ M	5	50~1000	1000	SOD-Q/TO-257	
98	NIUBZK5B ~ D	5	50~200	150	SOD-Q/TO-257	
99	NIU2CZ756	5	100	1000	SOD-Q/TO-257	
100	NIU1N5809	6	200	30	SOD-Q/TO-257	
101	NIUFR501 ~ 507	5	50~1000	150~500	SOD-Q/P600/TO-257	
102	NIUFR601 ~ 607	6				
103	NIUHER601 ~ 6010	6	50~1000	50~75	SOD-Q/P600/TO-257 SOD-Q/TO-257	
104	NIU2CZ08	6	150	30	D2-10A	
105	NIUSDR1D ~ N	1	200~1200	50~80		
106	NIUHER501 ~ 508	5	50~1000	50~75	SOD-Q/P600/TO-257	
107	NIUUF600 ~ 6010	6	50~1000	50~75		
108	NIUTW1U21 ~ 61	16	200~600	50		
109	NIUTW35HB60C	30	600	88		
110	NIU2CZ10A ~ D	10	300~1000	50~65	TO-257 TO-254	
111	NIU2CZ16A ~ D	16	300~1000	50~65		
112	NIU2CZ20A ~ D	20	300~1000	50~65		
113	NIU2CZ30A ~ D	30	300~1000	50~65		
114	NIUSU1A ~ M	1	50~1000	75	DO-214BA	
115	NIUSU1Y	0.5	1600	100		
116	NIUUS3A ~ M	3	50~1000	75	SMC	

6.Ultra-high voltage silicon rectifier diode

serial number	mode	IO (mA)	VRRM (KV)	appearance	Replacement model
1	NIUSJGF05KA ~ NIUSJGF15KA	10 ~200	5 ~ 15	J-95A	
2	NIUGP02-20 ~ 40	0.25	2 ~4	DO-41	

7.Silicon hybrid diode

serial number	mode	PO(mW)	Voltage regulating end VZ(V)	Rectifier End VRWM(V)	appearance	Replacement model
1	NIUZL047A ~ 054A	200	12 ~ 100	600	YD2-10R1	
2	NIUZL047B ~ 054B	200	12 ~ 100	600	YD2-10R2	
3	NIUZL024	100	34.5 ~38.7	600	SOD-E2	
4	NIUZL024 -N	100	34.5 ~38.7	600	SOD-E3	
5	NIUZL041	200	35.0 ~40.0	600	SOD-57	

8. Silicon voltage regulating diode

serial number	mode	PO (mW)	VZ (V)	appearance	Replacement model
1	NIUMMBZ5221B ~ 5270B	200	2.5 ~90	SOT-23/SOT-323 /SOT-523/SOD-123	
2	NIUBZT52C2V0S ~ 39S	200	2 ~ 39	SOD-323	
3	NIUMM3Z2V0 ~ 39V	200	2 ~ 39	SOD-323	
4	NIUMM5Z2V4 ~ 75V	200	2.4 ~ 75	SOD-523	
5	NIUBZX584C2V4 ~ C51	200	2.4 ~ 51	SOD-523	
6	NIUNZ9F2V4T5G ~ 24VT5G	200	2.4 ~ 24	SOD-923	
7	NIU2CW50 ~ 78	250	1.0 ~40	DO-35/MINI-MELF	
8	NIUBZX84 -A/B/C2V4 ~ 75	250	2.4 ~ 75	SOT-23/MINI-MELF	
9	NIUBZX55 -A/B/C2V4 ~ 75	500	2.4 ~ 75	DO-35/MINI-MELF	
10	NIUBZV55 -A/B/C2V4 ~ 75	500	2.4 ~ 75	DO-35/MINI-MELF	
11	NIUBWA50 -78	250	1.0 ~40	DO-35/MINI-MELF	
12	NIUBWB2V4 ~ 110	500	2.4 ~ 110	DO-35/MINI-MELF	
13	NIU2CW37 -2.4 ~ 36	500	2.4 ~ 36	DO-35/MINI-MELF	
14	NIU1N4099 ~ 4130	250	6.8 ~ 68	DO-35/MINI-MELF	
15	NIU1N4614 ~ 4627	250	1.8 ~ 6.2	DO-35/MINI-MELF	
16	NIUBZT52C2V0 ~ 51	300	2.0 ~ 11	SOD-123	
17	NIU1N4678 ~ NIU1N6025	500	1.8 ~ 110	DO-35/MINI-MELF	
18	NIU1N5221 ~ 5271	500	2.4 ~ 100	DO-35/MINI-MELF	
19	NIU1N4370 ~ 4372		2.4 ~ 3.0		
20	NIU1N746 ~ 986	500	2.4 ~ 110	DO-35/MINI-MELF	
21	NIU1N821 ~ NIU1N829		6.2		
22	NIU2CW5221 ~ NIU2CW5271	500	2.4 ~ 100	DO-35/MINI-MEL	
23	NIUZW50 ~ 78	500	1.0 ~ 40	DO-35/MINI-MELF	
24	NIUMMSZ5221B -5272B	500	2.4-110	SOD-123	
25	NIU2CW100 ~ 121	1000	1.0 ~ 40	DO-41/LL-41	
26	NIUBWC100 ~ 121	1000	1.0 ~ 40	DO-41/LL-41	
27	NIU1N4727 ~ 4764	1000	3.3 ~ 100	DO-41/LL-41	
28	NIUZW100 ~ 121	1000	1.0 ~ 40	DO-41/LL-41	
29	NIU1SMA5913 -5945	1500	3.3 ~ 68	SMA	

9. Silicon bridge rectifier

serial number	mode	IO (A)	VRRM (V)	appearance	Replacement model
1	NIUMDB051 ~ 056	0.5	100 ~ 600	MINI-DF	
2	NIUMSB051 ~ 056	0.5	100 ~ 600	MINI-DFS	
3	NIUDF005 ~ 010	1	50 ~ 1000	DF	
4	NIU2A906AT	0.05	75	DF	
5	NIUMDBL054	0.5	400	MINI-DF	
6	NIUMSBL054	0.5	400	MINI-DFS	
7	NIUDB101 ~ 107	1	50 ~ 1000	DF	
8	NIUKBP100 ~ 110	1	50 ~ 1000	KBP	
9	NIUKBP200 ~ 210	2	50 ~ 1000	KBP	
10	NIUKBJ301 ~ 310	3	100 ~ 1000	KBJ	
11	NIUKBJ401 ~ 410	4	100 ~ 1000	KBJ	
12	NIUKBJ4005 ~ 410	4	50 ~ 1000	KBL	
13	NIUKBPC400 ~ 410	4	50 ~ 1000	KBPC-6	
14	NIUKBPC600 ~ 610	6	50 ~ 1000	KBPC-6	
15	NIUKBU600 ~ 610	6	50 ~ 1000	KBU KBJ	
16	NIUKBJ601 ~ 610	6	100 ~ 1000	KBU KBJ	
17	NIUKBPC800 ~ 810	10	50 ~ 1000	KBPC-8/10	
18	NIUKBU800 ~ 810	10	50 ~ 1000	KBU	
19	NIUKBPC1000 ~ 1010	10	50 ~ 1000	KBPC-8/10	
20	NIUKBU1000 ~ 1010	10	50 ~ 1000	KBU	
21	NIUKBPC1500 ~ 1510	15	50 ~ 1000	KBPC-T	
22	NIUKBPC2500 ~ 2510	25	50 ~ 1000	KBPC-T	
23	NIUKBPC3500 ~ 3510	35	50 ~ 1000	KBPC-T	
24	NIUKBPC5000 ~ 5010	50			

10. Silicon high current rectifier diode

serial number	mode	IO (A)	VRRM (V)	appearance	Replacement model
1	NIUUGSA.NIUUESA.NIUFESA.NIUUGRA	5 ~ 15	50 ~ 600	TO-220AC/TO -220AB/TO -257	
2	NIUUERA.NIUFERA.NIURERA series	5 ~ 15	50 ~ 600	TO-220AC/TO -220AB/TO -257	
3	NIUUGSP.NIUUESP series	4 ~ 15	200 ~ 600	TO -220AC/TO -257	
4	NIUUESP.NIUFESP series	5 ~ 20	200 ~ 800	TO -220AC/TO -257	
5	NIUUGRP.NIUUERP.NIUFERP series	2.5 ~ 10	200 ~ 800	TO -220AC/TO -257	

Triode selection catalogue

11. Single bidirectional transient voltage suppression diode

serial number	mode	PPPM (W)	VBR(V)	appearance	Replacement model
1	NIUSMAJ3.3(A) ~ NIUSMAJ440(A) series	300	3.3 ~ 440	SMA	
2	NIUSMAJ3.3C(A) ~ NIUSMAJ440C(A) series	300	3.3 ~ 440	SMA	
3	NIUP4KE6.8(A) ~ NIUP4KE440(A) series	400	6.8 ~ 440	DO-41/SOD -64	
4	NIUP4KE6.8C(A) ~ NIUP4KE440C(A) series	400	6.8 ~ 440	DO-41/SOD -64	
5	NIUSA5.0(A) ~ NIUSA170(A) series	500	5.0 ~ 170	DO-15/SOD -64	
6	NIUSA5.0C(A) ~ NIUSA170C(A) series	500	5.0 ~ 170	DO-15/SOD -64	
7	NIUP6KE6.8(A) ~ NIUP6KE440(A) series	600	6.8 ~ 440	DO-15/SOD -64	
8	NIUP6KE6.8C(A) ~ NIUP6KE440C(A) series	600	6.8 ~ 440	DO-15/SOD -64	
9	NIUSMBJ5.0(A) ~ NIUSMBJ440(A) series	600	5.0 ~ 440	SMB	
10	NIUSMBJ5.0C(A) ~ NIUSMBJ440C(A) series	600	5.0 ~ 440	SMB	
11	NIU1.5KE6.8(A) ~ NIU1.5KE440(A) series	1500	6.8 ~ 440	DO-201AD/DO -13	
12	NIU1.5KE6.8C(A) ~ NIU1.5KE440C(A) series	1500	6.8 ~ 440	DO-201AD/DO -13	
13	NIU1N6267(A) ~ NIU1N6303(A) series	1500	6.8 ~ 220	DO-201AD/DO -13	
14	NIU1N6267C(A) ~ NIU1N6303C(A) series	1500	6.8 ~ 220	DO-201AD/DO -13	
15	NIUSMCJ5.0(A) ~ NIUSMCJ440(A) series	1500	5.0 ~ 440	DO-214AB	
16	NIUSMCJ5.0C(A) ~ NIUSMCJ440C(A) series	1500	5.0 ~ 440	DO-214AB	
17	NIUSMDJ5.0A ~ NIUSMDJ440A series	3000	5.0 ~ 440	DO-214AB	
18	NIUSMDJ5.0CA ~ NIUSMDJ440CA series	3000	5.0 ~ 440	DO-214AB	
19	NIU5.0SMDJ5.0A ~ 440A series	5000	11 ~ 440	DO-214AB	
20	NIU5.0SMDJ5.0CA ~ 440CA series	5000	11 ~ 440	DO-214AB	
21	NIU5KP5.0(A) ~ NIU5KP440(A)	5000	5.0 ~ 440	P600	
22	NIU5KP5.0C(A) ~ NIU5KP440C(A)	5000	5.0 ~ 440	P600	
23	NIU15KP17A ~ 280A	15000	17 ~ 280	P600	
24	NIU15KP17CA ~ 280CA	15000	17 ~ 280	P600	
25	NIU30KP28A ~ 300A	30000	28 ~ 300	P600	
26	NIU30KP28CA ~ 300CA	30000	28 ~ 300	P600	
27	NIU2TS6.8(A) ~ NIU2TS440(A) series	50	6.8 ~ 440	SOD-M/SOD -N	
28	NIU2TS6.8C(A) ~ NIU2TS440C(A) series	50	6.8 ~ 440	SOD-M/SOD -N	

Model	polarity	dissipation power	collector current	Collector-base breakdown voltage	Collector-emitter breakdown voltage	Emitter breakdown voltage	magnification times	Collector-emitter saturation voltage	packaging
		P _{CM} (mW)	I _C (mA)	V _{CBO} (V)	V _{CEO} (V)	V _{ESD} (V)	hFE	V _{CE(SAT)} (V)	
NIUS9014	NPN	200	100	50	45	5	200	0.3	SOT-323
NIUS9015	PNP	200	100	50	45	5	100-300	0.3	
NIUS9018	NPN	200	50	30	15	5	100-200	0.5	
NIUMMST3906	PNP	200	-200	-40	-40	-5	100-300	-0.4	
NIUMMST3904	NPN	200	200	60	40	6	100-300	0.3	SOT-23
NIU2SC4155	NPN	200	200	50	50	6	100-800	0.3	
NIUMMBT3906T	PNP	200	-400	-40	-40	-5	100-300	-0.28	
NIUMMBTSA1979	PNP	200	-500	-40	-32	-5	70-240	-0.25	
NIUMMBTSA1198	PNP	200	-500	-80	-80	-5	100-400	-0.5	
MMBTSC2411	NPN	200	500	40	32	5	80-400	0.4	
MMBTSC3876	NPN	200	500	35	30	5	70-400	0.25	
NIUMMBTA55	PNP	200	-500	-60	-60	-4	>100	0.25	
NIUMMST4401	NPN	200	600	60	40	6	100-300	0.4	
NIUMMST2907	PNP	200	-600	-60	-60	-5	100-300	-0.4	
NIUMMST2222	NPN	200	600	75	40	6	100-300	1	
NIUMMST4403	PNP	200	-600	-40	-40	-5	100-300	-0.4	
NIUMMBT5400	PNP	200	-600	-130	-120	-5	40-180	-0.5	
NIU2SB624	PNP	200	-700	-30	-25	-5	100-400	-0.6	
NIU2SD596	NPN	200	700	30	25	5	100-400	0.6	
NIUBCW68	PNP	200	-800	-60	-45	-5	100-600	-0.7	
NIUMMBTSB1197	PNP	200	-800	-40	-32	-5	100-300	-0.5	
NIUMMBTSD1781	NPN	200	800	40	32	5	100-300	0.4	
NIUMMBT591A	PNP	200	-1000	-40	-40	5	300-800	-0.5	
NIUMMBT491A	NPN	200	1000	40	40	5	300-800	0.5	
NIUMMBT495	NPN	200	1000	170	150	5	100-300	0.3	
NIU2SC2881	NPN	300	800	120	120	5	80-240	1	SOT-23
NIUPBSS4140T	NPN	300	1000	40	40	5	>300	0.5	
NIUPBSS5140	PNP	300	1000	-40	-40	-5	>300	0.5	
NIUSS8050	NPN	300	1500	40	25	5	120	0.5	
NIUSS8550	PNP	300	-1500	-40	-25	-5	200	-0.5	
NIUPBSS5240T	PNP	300	-2000	-40	-40	-5	300-450	-0.35	
NIUPBSS4240	NPN	300	2000	40	40	5	>300	0.32	
NIUMMBT2907	PNP	350	-600	-60	-60	-5	100-300	-0.4	
NIUMMBTA94	PNP	350	-200	-400	-400	-5	80-300	-0.3	
NIUMMBTA44	NPN	350	200	400	400	6	100-300	0.5	
NIUMMBTA42	NPN	350	300	300	300	5	100-200	0.2	
NIUMMBTA93	PNP	350	-500	-200	-200	-5	> 40	-0.5	
NIUMMBTA43	NPN	350	500	200	200	5	> 40	0.5	
NIUFMMT489	NPN	350	1000	40	25	6	200-400	0.5	
NIUFMMT589	PNP	350	1000	-40	-25	6	200-400	-0.6	
NIUFMMT619	NPN	350	2000	50	50	5	100-300	0.2	
NIUFMMT491	NPN	500	1000	80	60	5	100-300	0.5	
NIUFMMT591	PNP	500	1000	-80	-60	-5	100-300	-0.6	
NIUFMMT493	NPN	500	1000	120	100	5	100-300	0.6	
NIUFMMT593	PNP	500	1000	-120	-100	-5	100-300	-0.3	
NIUFMMT617	NPN	625	3000	15	15	5	300-450	0.2	
NIUFMMT618	NPN	625	1500	20	20	5	300-450	0.2	
NIUFMMT624	NPN	625	1000	125	125	5	>200	0.25	

Model	polarity	dissipation power	collector current	Collector-base breakdown voltage	Collector-emitter breakdown voltage	Emitter breakdown voltage	magnification times	Collector-emitter saturation voltage	packaging
		P _{CM} (mW)	I _C (mA)	V _{CBO} (V)	V _{CEC} (V)	V _{EB0} (V)	hFE	V _{CE(SAT)} (V)	
NIU2SB772	PNP	1000	3000	-40	-30	-5	60-400	-0.5	SOT-89
NIU2SB798	PNP	1000	1000	-30	-25	-6	100-400	-0.5	
NIU2SB799	PNP	1000	-1500	-40	-25	-6	200-300	-0.5	
NIU2SD882	NPN	1000	3000	40	30	5	60-400	0.5	
NIU2SD1623	NPN	1000	1500	40	25	6	160-300	0.5	
NIU2SB1123	PNP	1000	-1500	-40	-25	-6	140-400	-0.5	
NIUBCX51	PNP	1000	-1000	-45	-45	-5	>60	-0.5	
NIUBCX52	PNP	1000	-1000	-60	-60	-5	>60	-0.5	
NIUBCX53	PNP	1000	-1000	-80	-80	-5	>60	74	
NIUMJD31C	NPN	1250	3000	100	100	5	25-75	1.2	
NIUMJD32C	PNP	1250	-3000	-100	-100	-5	25-75	-1.2	
NIUMJD112	NPN	1000	2000	100	100	5	>200	3	
NIUMJD127	PNP	1500	-8000	-100	-100	-5	>100	-4	
NIU2SD1815	NPN	1000	3000	120	100	6	40-400	1.2	
NIU2SD1760	NPN	1500	3000	60	50	5	80-300	1	
NIUD882M	NPN	1250	3000	40	30	5	60-400	0.5	
NIU2SC2983	NPN	1000	1500	160	160	5	70-240	1.5	
NIU2SD1802	NPN	1000	3000	60	50	6	100-500	1.2	

Power module selection list							
serial number	product name	product model	Voltage (V)	Current (A)	category	Benchmark imported product model	Benchmark imported brands
1	IGBT module	NIU200R12KE4P	1200	200	silica-based support	FF200R12KE4P	Infineon
2	IGBT module	NIU450R12KE4P	1200	450	silica-based support	FF450R12KE4P	Infineon
3	IGBT module	NIU300R12ME	1200	300	silica-based support	FF300R12ME	Infineon
4	IGBT module	NIU600R12ME	1200	600	silica-based support	FF600R12ME	Infineon
5	IGBT module	NIU200R12KT4R	1200	200	silica-based support	FS200R12KT4R	Infineon
6	Diode module	NCDM100D120R3P11NA	1200	100	SiC	APT2X101D120J GB2X100MPS12 -227	Microchip GeneSic
7	Diode module	NCDM100D120Z2P11NA	1200	100	SiC	GB2X100MPS12 -227	GeneSic
8	(national production)	NCSM050F120R3P03NA	1200	50	SiC		
9	Diode module	NCSM240D065R3P03NA	650	240	SiC	FF6MR12W2M1B11BOM A1	Infineon
10	Half-bridge module	NCSM300D120R3P01WA	1200	300	SiC	BSM300D12P2E001	rom
11	Half-bridge module	NCSM600D120R3P01WA	1200	600	SiC	BSM600D12P3G001	rom
12	Half-bridge module	NCSM600D120Z2P01WA	1200	600	SiC	BSM600D12P3G001	rom
13	Half-bridge module	NCSM250D170G2P01WA	1700	250	SiC	BSM250D17P2E004	rom
14	(national production)	NCSM100F120R3P03WA	1200	100	SiC	FF11MR12W1M1B11BO MA1	Infineon
15	Half-bridge module	NCCM600D120R3P01NA	1200	600	SiC	BSM600C12P3G201	rom
16	Full bridge module	NCCM600D120Z2P01NA	1200	600	SiC	BSM600C12P3G201	rom
17	Chopper module	NCVM098D120R3P03NA	1200	98	SiC		

16-MOSFET

MOSFET selection catalogue

model	Polarity and packaging	Drain-source breakdown voltage BV _{DSS} (V)	drain current ID(A)	Gate-source voltage V _{GS} (V)	Gate threshold voltage V _{GS(th)} (V)	Internal resistance of drain and source R _{DS(ON)} (mΩ) @4.5V TYP	Internal resistance of drain and source R _{DS(ON)} (mΩ) @10V TYP	Gate charge Q _g (nC) @V _{GS} =10V	Corresponding model
NIUM3N025Q	N SOT-323	20	3	±10	0.78	57			2102W
NIUM2P025Q	P SOT-323	-20	-2	±10	-0.62	100			2101W
NIUM01N065Q	N SOT-323	60	0.115	±20	1.6	1300	1200		2N7002W
NIUM03N055Q	N SOT-323	50	0.34	±20	1.2	1200			BSS138W
NIUM02N105Q	N SOT-323	100	0.2	±20	1.8	3500			BSS123W
NIUM03N065I	N SOT-23	60	0.34	±20	1.5	1300	1200		2N7002
NIUM03N065I	N SOT-23	60	0.3	±20	1.5	2000	1900		2N7002K
NIUM4P0125I	P SOT-23	-12	-4.1	±12	-0.7	30			
NIUM3P025I	P SOT-23	-20	-3.4	±10	0.62	42			2301
NIUM03N055I	N SOT-23	50	0.34	±20	1.2	1200			BSS138
NIUM02N055I	N SOT-23	50	0.22	±20	1.0	5000	3500		
NIUM02N105I	N SOT-23	100	0.2	±20	1.8	3500			BSS123
NIUM01P065I	P BSS84	-60	-0.17	±20	-1.4	3500			BSS84
NIUM4N025I	N SOT-23	20	4.3	±10	0.85	21			2302
NIUM5P025I	P SOT-23	-20	-5.4	±10	0.62	27			2305
NIUM6N025I	N SOT-23	20	6.8	±10	0.62	13.5			2312
NIUM4P035I	P SOT-23	-30	-4.4	±12	-0.9	52			3401
NIUM5N035I	N SOT-23	30	5.6	±20	1.2	27	21		3404
NIUM4P035I	P SOT-23	-30	-4.1	±20	-1.5	52	36		3407
NIUM5N035I	N SOT-23	30	5.6	±12	0.9	31			3400A
NIU2N7002DW	Dual N SOT-363	60	0.34	±20	1.6	1300	1200		2N7002DW
NIUBSS138DW	Dual N SOT-363	50	0.34	±20	1.2	1200	1100		BSS138DW
NIUBSS84DW	Dual P SOT-363	-60	-0.15	±20	-1.4	3500	3300		BSS84DW

SiC power module products

serial number	product name	product model	topological structure	packaging
1	1200V/600A half-bridge module	NIUSM600D120R3P01	Half-bridge	
2	1200V/600A half-bridge module	NIUSM600D120Z2P01	Half-bridge	
3	1200V/600A half-bridge module	NIUSM600D120X2P01	Half-bridge	
4	1200V/480A half-bridge module	NIUSM480D120R3P01	Half-bridge	
5	1200V/480A half-bridge module	NIUSM480D120X2P01	Half-bridge	
6	1200V/300A half-bridge module	NIUSM300D120R3P01	Half-bridge	P01-PMED3
7	1200V/300A half-bridge module	NIUSM300D120X2P01	Half-bridge	(Econodual)
8	1200V/600A chopper module	NIUCM600D120R3P01	chopped wave	
9	1200V/600A chopper module	NIUCM600D120Z2P01	chopped wave	
10	1200V/480A diode module	NIUDM480D120R3P01	Half-bridge	
11	1700V/500A half-bridge module	NIUSM500D170C3P01	Half-bridge	
12	1700V/380A half-bridge module	NIUSM380D170C3P01	Half-bridge	
13	1700V/300A half-bridge module	NIUSM300D170C3P01	Half-bridge	P01-PMED3

17-POWER MODULE

serial number	product name	product model	topological structure	packaging
14	1700V/380A chopper module	MIUCM380D170C3P01	chopped wave	(Econodual)
15	1700V/300A chopper module	NIUCM300D170C3P01	chopped wave	
16	1200V/50A full-bridge module	NIUSM050F120R3P03	Full bridge	
17	1200V/100A half-bridge module	NIUSM100D120R3P03	Half-bridge	
18	1200V/100A half-bridge module	NIUSM100D120X2P03	Half-bridge	
19	1200V/100A chopper module	NIUCM100D120X2P03	chopped wave	P03-PME1B
20	1200V/50A Vienna module	NIUVM050D120R3P03	Vienna rectifier	(Easy1B)
21	650V/150A half-bridge module	NIUSM150D065R3P03	Half-bridge	
22	1200V/50A full-bridge diode module	NIUDM050F120R3P03	Full bridge	
23	1200V/200A half-bridge module	NIUSM200D120R3P04	Half-bridge	
24	1200V/200A half-bridge module	NIUSM200D120X2P04	Half-bridge	
25	1200V/100A full-bridge module	NIUSM100F120R3P04	Full bridge	
26	1200V/100A full-bridge module	NIUSM100F120X2P04	Full bridge	
27	1200V/200A chopper module	NIUCM200D120X2P04	chopped wave	P04-PME2B
28	1200V/150A Vienna module	NIUVM150D120X2P04	Vienna rectifier	(Easy2B)
29	1200V/150A three-level module	NIUTM150D120X2P04	Three levels	
30	1200V/100A full-bridge diode module	NIUDM100F120R3P04	Full bridge	
31	1200V/90A MOSFET Single Tube Module	NIUSM0905120Q1P11	monotube	
32	1200V/90A Single-tube Chopper Module	NIUCM0905120Q1P11	chopped wave	P11-PMS227
33	1200V/90A Solid State Switch Module	NIUGM0905120Q1P11	solid-state switch	(SOT227)
34	1200V/100A double diode module	NIUDM100D120R3P11	2x single tube	
35	1200V/100A double diode module	NIUDM100D120B2P11	2x single tube	P11-PMS227
36	1200V/100A double diode module	NIUDM100D120Z2P11	2x single tube	(SOT227)
37	1700V/100A diode module	NIUDM100D170C6P17	Half-bridge	P17-PMTS(Case TS)
38	1200V/480A diode module	NIUDM480D120R3P01	Half-bridge	P16-PME(Case E)
39	1700V/45m Ω MOSFET Single Tube Module	NIUS32E4170G1	monotube	
40	1700V/20m Ω MOSFET Single Tube Module	NIUS80E4170G1	monotube	TO-247-4
41	1200V/16m Ω MOSFET Single Tube Module 1200V/600A half-bridge module	NIUS90E4120G1	monotube	

18-OPTICAL MODULE

Optical module selection table

serial number	rate	package	model	distance	wavelength	joggle /interface	Working temperature												
1	100G	QSFP28 LR4	YRQ2-HG10-xxDCL	10km	1294.53- 1296.59nm	LC	0~70°C -40~85°C												
					1299.02-1301.09nm														
					1303.54- 1305.63nm														
					1308.09-1310.19nm														
2	100G	QSFP28 ER4	YRQ2-HG40-XXDCL	40km	1294.53- 1296.59nm	LC	0~70°C -40~85°C												
					1299.02-1301.09nm														
					1303.54- 1305.63nm														
					1308.09-1310.19nm														
3	100G	QSFP28 CWDM4	YRQ2-HG02-xxDCL	2km	1271nm,1291nm	LC	0~70°C -40~85°C												
					1311nm,1331nm														
4	100G	QSFP28 PSM4	YRQ2-HG02-31DCM	2km	1310nm	MPO		0~70°C -40~85°C											
5	100G	QSFP28 SR4	YRQ2-HG01-85DCM	100m	850nm	MPO													
6	100G	AOC	YRQ2-HGXX-85DCA	1~100m	850nm	AOC													
7	40G	QSFP+ LR4	YRQP-FT10-XXDCL	10km	1271nm,1291nm	LC	0~70°C -40~85°C												
					1311nm,1331nm														
					8			40G	QSFP+ LR4	YRQP-FT02-XXDCL	2km	1271nm,1291nm	LC	0~70°C -40~85°C					
												1311nm,1331nm							
9	40G	QSFP+ SR4	YRQP-FT01-85DCL	100m	850nm	MPO													
10	40G	QSFP+ SR4	YRQP-FT03-85DCL	300m	850nm	MPO													
11	40G	AOC	YRQP-FTXX-85DCA	1~100m	850nm	AOC													
12	25G	SFP28 SR	YRSP-TF01-85DCL	100m	850nm	LC	0~70°C -40~85°C												
					13			25G	SFP28 LR	YRSP-TF10-31DCL	10km	1310nm	LC						
												14		25G	SFP28 BIDI	YR BSP-TF10-23DXL	10km	1270/1330nm	LC
																		15	
												16		25G	SFP28 BIDI	YR BSP-TF20-23DXL	20km		1270/1330nm
17	25G	SFP28 BIDI	YR BSP-TF20-32DXL	20km	1270/1330nm	LC													
					18		25G	SFP+	YRSP-TG03-85DXL	300m	850nm	LC							
19	25G	SFP+	YRSP-TG02-31DXL	2km	1310nm	LC													
20	25G	SFP+	YRSP-TG10-31DXL	10km	1310nm	LC													
21	25G	SFP+	YRSP-TG40-55DXL	40km	1550nm	LC													
22	25G	SFP+	YRSP-TG80-55DXL	80km	1550nm	LC													
23	10G	SFP+ CWDM	YRWSP-TG40-XXDXL	40km	CWDM	LC	0~70°C -40~85°C												
					CWDM														
24	10G	SFP+ CWDM	YRWSP-TG80-XXDXL	80km	CWDM	LC													
25	10G	SFP+ DWDM	YRDSP-TG40-XXDXL	40km	DWDM(f100G Hz)	LC													
26	10G	SFP+ DWDM	YRDSP-TG80-XXDXL	80km	DWDM(100G Hz)	LC													
27	10G	SFP+ BIDI	YR BSP-TG20-XXDXL	20km	1270/1330nm	LC													
28	10G	SFP+ BIDI	YR BSP-TG40-XXDXL	40km	1270/1330nm	LC													
29	10G	SFP+ BIDI	YR BSP-TG60-XXDXL	60km	1270/1330nm	LC													

SSD solid state disk

product name	product model	Product capacity (actual capacity)	storage medium	Working temperature
M.2 PCIe SSD 2280	QCPT01Q512GI	512GB (480GB)	3D TLC	-40°C~85 °C
	QCPT01Q01TI	1T (960G)	3D TLC	-40°C~85 °C
	QCPT01Q02TI	2T (1920GB)	3D TLC	-40°C~85 °C
	QCPT01Q04TI	4T (3840GB)	3D TLC	-40°C~85 °C
product name	product model	nominal capacity	storage medium	Working temperature
M.2 PCIe SSD 2280	QCPNM256GBI	256GB	3D TLC	-40°C~85 °C
	QCPNM512GBI	512GB	3D TLC	-40°C~85 °C
	QCPNM01TBI	1TB	3D TLC	-40°C~85 °C
	QCPNM02TBI	2TB	3D TLC	-40°C~85 °C
	QCPNM04TBI	4TB	3D TLC	-40°C~85 °C
product name	product model	nominal capacity	storage medium	Working temperature
M.2 SATA SSD 2242	QCM4S064GBI	64GB	3D TLC	-40°C~85 °C
	QCM4S128GBI	128GB	3D TLC	-40°C~85 °C
	QCM4S256GBI	256GB	3D TLC	-40°C~85 °C
	QCM4S512GBI	512GB	3D TLC	-40°C~85 °C
	QCM4S01TBI	1TB	3D TLC	-40°C~85 °C
product name	product model	nominal capacity	storage medium	Working temperature
mSATA (29.85 x 50.80 x 4.85)	QCZSMST256GI	240GB	3D TLC	-40°C~85 °C
	QCZSMST512GI	480GB	3D TLC	-40°C~85 °C
	QCZSMST01TGI	960GB	3D TLC	-40°C~85 °C
	QCZSMST02TGI	1920GB	3D TLC	-40°C~85 °C
Product form	product model	nominal capacity	storage medium	Working temperature
2.5" 7mm (100.20 x 69.85 x 7.00)	QCM128S3I27SDx	128GB	MLC	-40°C~85 °C
	QCM256S3I27SDx	256GB	MLC	-40°C~85 °C
	QCM512S3I27SDx	512GB	MLC	-40°C~85 °C
	QCM1T1S3I27SDx	1TB	MLC	-40°C~85 °C
	QCM2T1S3I27SDx	2TB	MLC	-40°C~85 °C
mSATA (29.85 x 50.80 x 4.85)	QCM128S3IMASD	128GB	MLC	-40°C~85 °C
	QCM256S3IMASD	256GB	MLC	-40°C~85 °C
	QCM512S3IMASD	512GB	MLC	-40°C~85 °C
M.2 SATA 2242 (42.00 x 22.00 x 3.73)	QCM128S3IN4SA	128GB	MLC	-40°C~85 °C
	QCM256S3IN4SA	256GB	MLC	-40°C~85 °C

Product form	product model	nominal capacity	storage medium	Working temperature
2.5" 7mm (100.20 x 69.85 x 7.00)	QCT512S3I27SDx	512GB	TLC	-40°C~85 °C
	QCT1T0S3I27SDx	960GB	TLC	-40°C~85 °C
	QCT1T1S3I27SDx	1TB	TLC	-40°C~85 °C
	QCT2T0S3I27SDx	1.92TB	TLC	-40°C~85 °C
	QCT2T1S3I27SDx	2TB	TLC	-40°C~85 °C
	QCT4T2S3I27SDx	4TB	TLC	-40°C~85 °C
mSATA (29.85 x 50.80 x 4.85)	QCT256S3IMASD	256GB	TLC	-40°C~85 °C
	QCT512S3IMASD	512GB	TLC	-40°C~85 °C
	QCT1T1S3IMASD	1TB	TLC	-40°C~85 °C
	QCT2T0S3IMASD	1.92TB	TLC	-40°C~85 °C
	QCT2T2S3IMASD	2TB	TLC	-40°C~85 °C
M.2 SATA 2280 (80.00 x 22.00 x 4.08)	QCT1T1S3IN6SD	1TB	TLC	-40°C~85 °C

SSD product series	2.5" SATA	mSATA	M.2 SATA	M.2 PCIe
General information :				
Physical size	2.5 " Inch	JEDEC MO-300A	M.2 2242, 2280	M.2 2280
capacity	128GB ~ 4TB	256GB ~2TB	128GB ~ 1TB	256GB ~ 4TB
Flash memory type	TLC/MLC	MLC/TLC	MLC/TLC	TLC
input voltage	3.3V ±5%	3.3V ±5%	3.3V ±5%	3.3V ±5%
power consumption	Operating power consumption < 3.5W. Idle power consumption v 0.7W	Operating power consumption < 2.7W. Idle power consumption v 0.6W	Operating power consumption < 2.5w Idle power consumption v0.5w	Operating power consumption < 4.2w Idle power consumption v0.5w.
Performance information :				
Maximum sequential reading (MB/s)	550			3,600
Maximum sequential write (MB/S)	470			3,100
Maximum random read (IOPS)	92000 IOPS			500K IOPS
Maximum Random Write (IOPS)	80000 IOPS			340K IOPS
Reliability:				
operating temperature	0 ~ 70 °C, -20 C ~ 70 °C, -40 C ~ 85 °C			
storage temperature	-40 ~ 85 °C			
MTBF (hours)	1,500,000			
Warranty period (year)	3			
Life information :				
UBER	1 sector per 10-15 bits read			
TBW (Max.Capacity)	2400TB (TLC)			1920TB (TLC)