




SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N0310-R610A10000AA0A
DATE	Mar. 10, 2021
REVISION	A0
DESCRIPTION	<p>Axial Lead General Purpose Silicon Rectifier, R-6 series, 10A10 Type 2 Pins Reverse Voltage 1000V Max. Forward Current 10.0A Max. Operating Temp. Range -55°C ~+150°C Package in AMMO Pack, 5000pcs/Tape, Tape/Box RoHS/RoHS III compliant</p>
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD 10A10 – T/B
PART CODE	R610A10000AA0A

VENDOR APPROVE			
Issued/Checked/Approved			
DATE: March 10, 2021			

CUSTOMER APPROVE
DATE:

GENERAL PURPOSE SILICON RECTIFIER R6 SERIES

MAIN FEATURE

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- High forward surge current capability
- High temperature soldering guaranteed, 250 °C/10 seconds at terminals
- Low reverse leakage



APPLICATION

- For printed circuit board

PART CODE GUIDE

RFQ

[Request For Quotation](#)

R6	10A10000	A	A0A
1	2	3	4

- 1) **R6**: Axial Lead General Purpose Silicon Rectifier, 2 Pins, R-6 series
- 2) **10A10000**: Type code for original part number 10A10-T/B
- 3) **A**: Package code, Package in AMMO Pack, 5000pcs/Tape, Tape/Box
- 4) **A0A**: Specification code for Reverse Voltage 1000V Max. Forward Current 10.0A Max.

MORE ITEMS AVAILABLE

R66A050000A605	R66A010000A610	R66A020000A620	R66A040000A640	R66A060000A660
R66A080000A680	R66A100000A60A			
R68A050000A805	R68A010000A810	R68A020000A820	R68A040000A840	R68A060000A860
R68A080000A880	R68A100000A80A			
R610A05000AA05	R610A01000AA10	R610A02000AA20	R610A04000AA40	R610A06000AA60
R610A08000AA80	R610A10000AA0A			

GENERAL PURPOSE SILICON RECTIFIER R6 SERIES

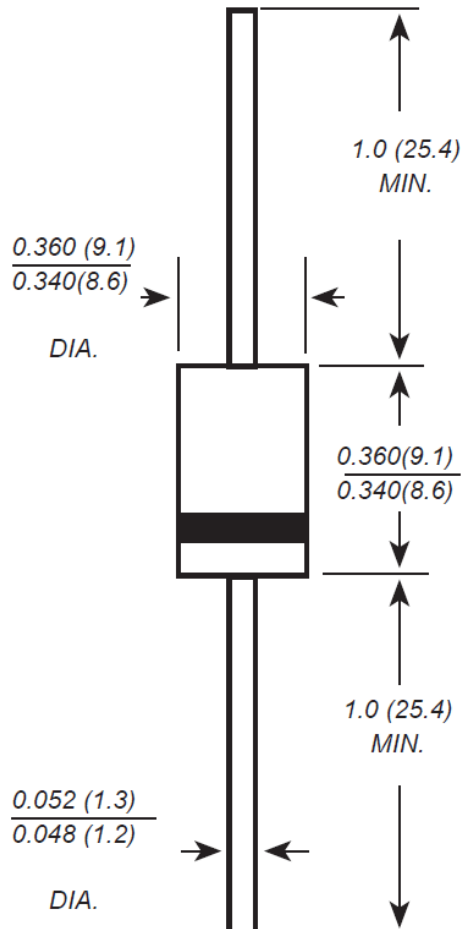
DIMENSION (Unit: Inch/mm)

Image for reference



Marking: 10A10

R-6



GENERAL PURPOSE SILICON RECTIFIER R6 SERIES

MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC R-6 molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on case	Any	0.072 Ounce, 2.239 grams

MAX. RATING & CHARACTERISTICS

Parameter	SYMBOLS	VALUE			UNITS
		Min.	Typical	Max.	
Repetitive peak reverse voltage	V_{RRM}			1000	Volts
RMS voltage	V_{RMS}			700	Volts
DC blocking voltage	V_{DC}			1000	Volts
Average forward output rectified current at TL= 60°C	I_{AV}			10.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}		600		A
Instantaneous forward voltage at 10.0A	V_F			1.0	Volts
DC reverse current at rated DC blocking voltage	I_R			10	μA
				100	μA
Junction capacitance (Note 2)	C_J		150		pF
Thermal resistance (Note 3)	R_{QJA}		10		°C/W
Operating junction temperature range	T_J	-50		+150	°C
Storage temperature range	T_{STG}	-50		+150	°C

Note

1. Ratings at 25 C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.
2. Measured at 1.0MHz and applied reverse voltage of 4.0Voltage
3. Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length, PCB. Mounted.

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RELIABILITY

Number	Experiment Items	Experiment Method And Conditions	Reference Documents
1	Solder Resistance Test	Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32"	MIL-STD-750D METHOD-2031.2
2	Solderability Test	230°C ±5°C for 5 sec.	MIL-STD-750D METHOD-2026.1 0
3	Pull Test	1 kg in axial lead direction for 10 sec.	MIL-STD-750D METHOD-2036.4
4	Bend Test	0.5Kg Weight Applied To Each Lead, Bending Arcs 90 °C ± 5 °C For 3 Times	MIL-STD-750D METHOD-2036.4
5	High Temperature Reverse Bias Test	TA=100°C for 1000 Hours at VR=80% Rated VR	MIL-STD-750D METHOD-1038.4
6	Forward Operation Life Test	TA=25°C Rated Average Rectified Current	MIL-STD-750D METHOD-1027.3
7	Intermittent Operation Life Test	On state: 5 min with rated IRMS Power Off state: 5 min with Cool Forced Air. On and off for 1000 cycles.	MIL-STD-750D METHOD-1036.3
8	Pressure Cooker Test	15 PSIG, TA=121°C, 4 hours	MIL-S-19500 APPENOIXC
9	Temperature Cycling Test	-55°C~+125°C; 30 Minutes For Dwelled Time 5 minutes for transferred time. Total: 10 cycles.	MIL-STD-750D METHOD-1051.7
10	Thermal Shock Test	0°C for 5 minutes., 100°C for 5minutes, Total: 10 cycles	MIL-STD-750D METHOD-1056.7
11	Forward Surge Test	8.3ms Single Sale Sine-wave One Surge.	MIL-STD-750D METHOD-4066.4
12	Humidity Test	TA=65°C, RH=98% for 1000 hours.	MIL-STD-750D METHOD-1021.3
13	High Temperature Storage life Test	150°C for 1000 Hours	MIL-STD-750D METHOD-1031.5

GENERAL PURPOSE SILICON RECTIFIER R6 SERIES

RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

FIG. 1 -- TYPICAL FORWARD CHARACTERISTIC

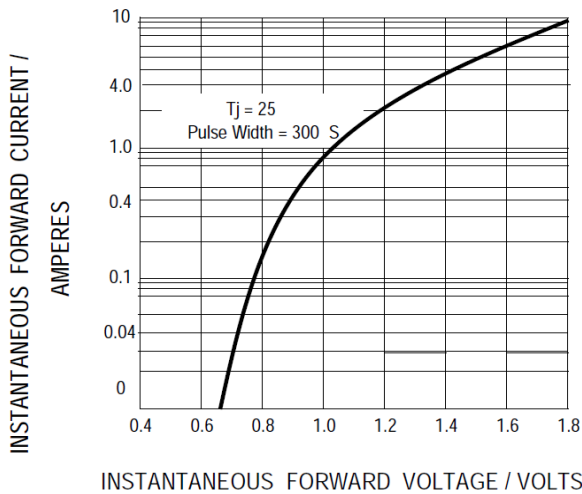


FIG. 2 -- TYPICAL JUNCTION CAPACITANCE

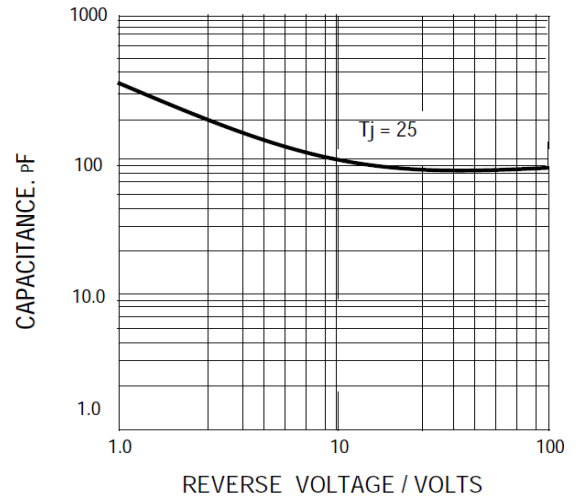


FIG. 3 -- FORWARD CURRENT DERATING CURVE

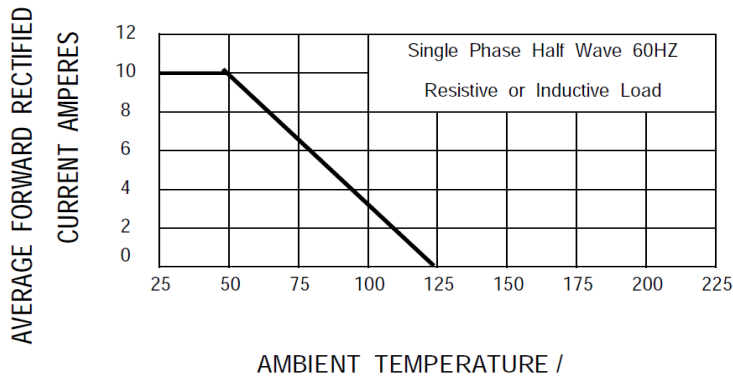
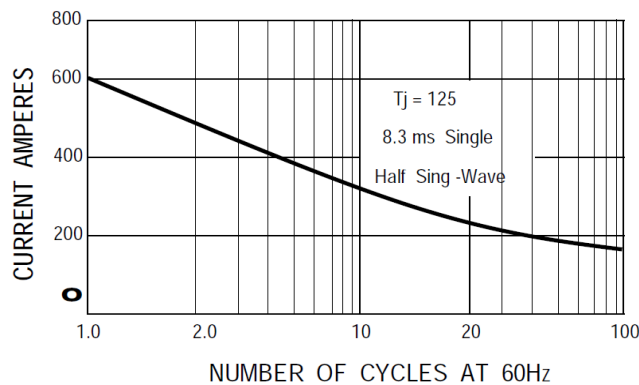


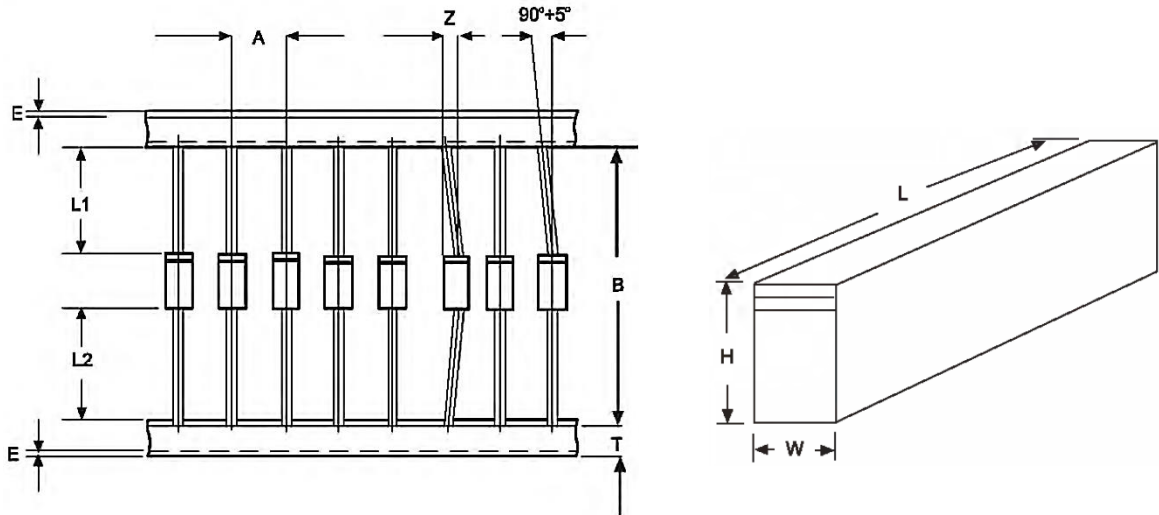
FIG. 4 -- PEAK FORWARD SURGE CURRENT



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AMMO BOX (Unit: mm)

- All Devices are packed in accordance with EIA standard RS-296-D and specifications.
- Each component lead shall be sandwiched between taps for A minimum of 3.2 mm (0.126")



Item	Symbol	R-6 Uni(mm)	R-6 Unit (Inch)
Component Alignment	Z	1.2 Max.	0.048 Max.
Tape Width	T	6.0 +/- 0.4	0.236 +/- 0.016
Exposed Adhesive	E	0.8 Max.	0.032 Max.
Body Eccentricity	L1 – L2	1.0 Max.	0.040 Max.
Component Pitch A (2.0mm/10 pitch)	A	10.0	0.197
Component Pitch B (2.0mm/10 pitch)	B	52.4	1.023
Component Pitch A (2.0mm/20 pitch)	-	-	-
Component Pitch B (2.0mm/20 pitch)	-	-	-
Box Length	L	450.0 +/- 5.0	17.72 +/- 0.197
Box Width	W	215.0 +/- 5.0	8.46 +/- 0.197
Box Height	H	250.0 +/- 5.0	9.84 +/- 0.197

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AMMO PACK IN TAPE/BOX (Unit: mm)

Case Code	Qty. Per Reel (pcs)	Component Space (mm)	Tape Space (mm)	Inner Box L*W*H (mm)	Carton size L*W*H (mm)	Qty. Per Carton (pcs)	G. W (kg)
R-6	500	10	52.4	198*86*21	450*215*250	5,000	7.45

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