

**SILICON RECTIFIER**

**VOLAGE RANGE 50 to 600 Volts CURRENT 12 Ampere**

**FEATURES**

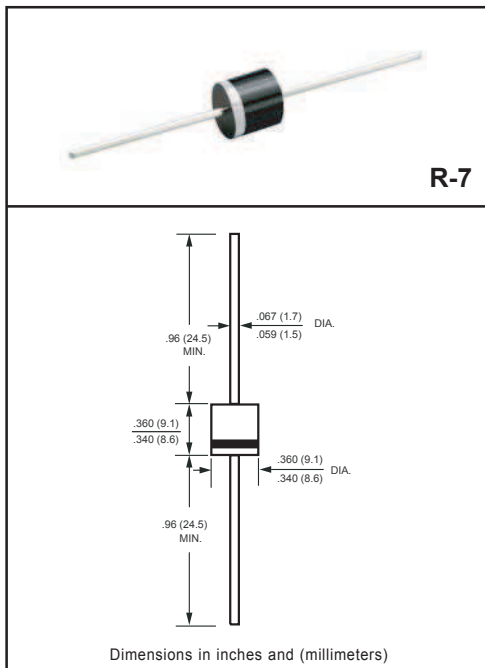
- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High surge current capability
- \* Ideal for solar panel PV application such as By-Pass diode

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 2.08 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.



MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	SPA1201	SPA1202	SPA1203	SPA1204	SPA1205	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	480	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	Volts
Maximum DC Forward Current @TL=125°C(Note 2)	IO	12					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	400					Amps
Typical Current Squared Time	i <sup>2</sup> T	663.7					A <sup>2</sup> S
Typical Junction Capacitance (Note)	CJ	125					pF
Typical Thermal Resistance	RθJA	8					°C/W
Operating Temperature Range	TJ	175(TJ≤200°C in Bypass Mode)					°C
Storage Temperature Range	TSTG	-55 to +175					°C

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SPA1201	SPA1202	SPA1203	SPA1204	SPA1205	UNITS
Maximum Instantaneous Forward Voltage at 12A DC	VF	1.0					Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@TA = 25°C	10					uAmps
	@TA = 100°C	100					
Maximum Full Load Reverse Current Average Full Cycle .375" (9.5mm) lead length at TL = 75°C	IR	50					uAmps

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts  
2. Heat-sink mounted 10mm max from body

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# RATING AND CHARACTERISTIC CURVES ( SPA1201 THRU SPA1205 )

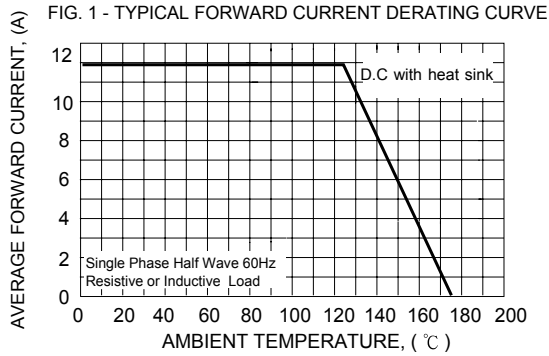


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

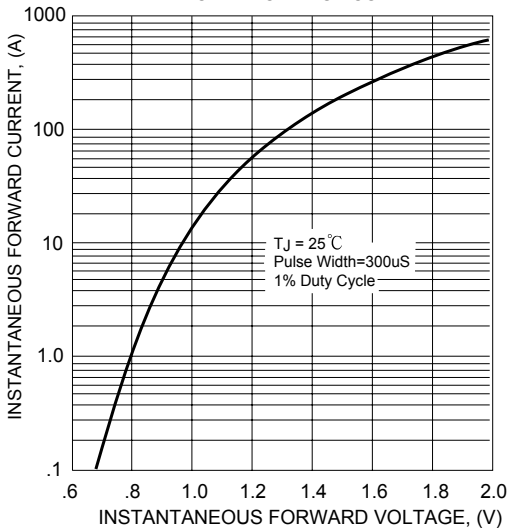


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

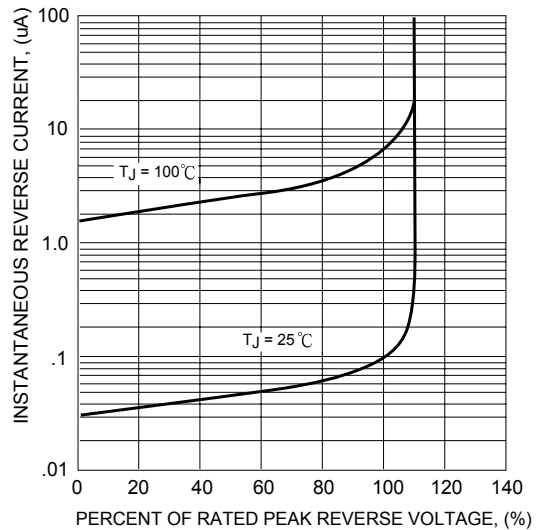


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

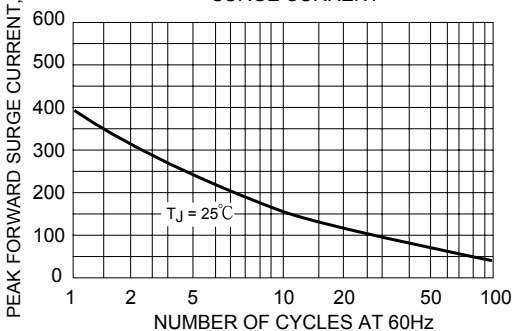
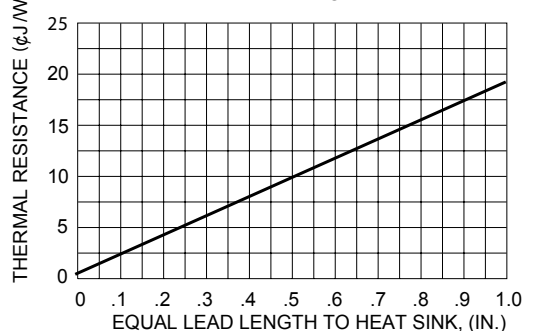
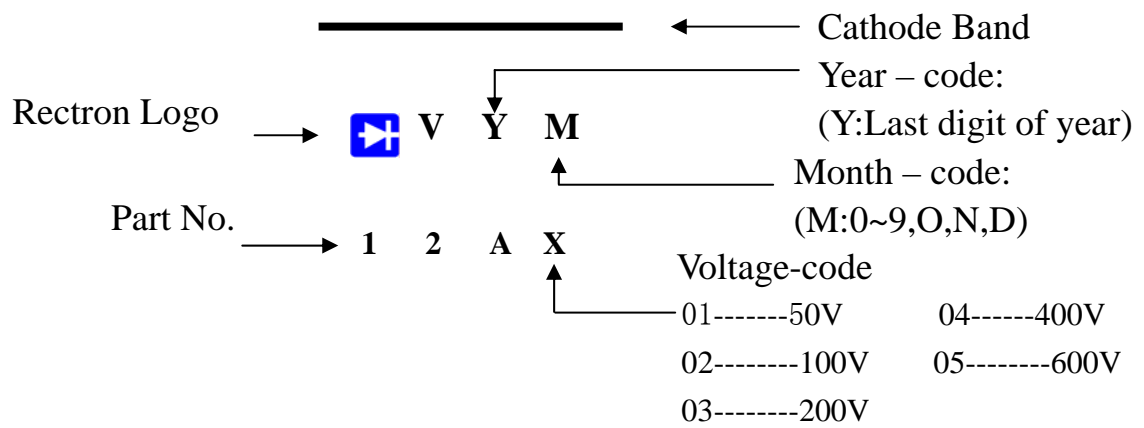


FIG. 5 - TYPICAL THERMAL RESISTANCE VS LEAD LENGTH



## Marking Description



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