



SILICON RECTIFIER

VOLAGE 200 Volts CURRENT 20 Ampere

FEATURES

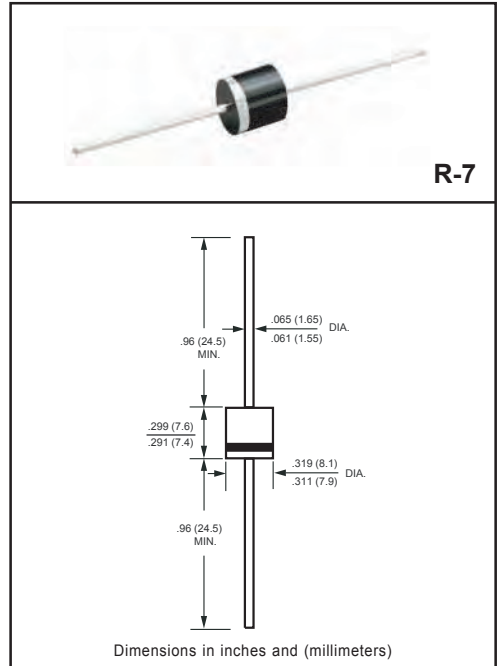
- * Low cost
- * Low leakage
- * Low forward voltage drop
- * High current capability
- * High surge current capability
- * Ideal for solar panel PV application such as By-Pass diode

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-O
- * 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	SPA2003-T-S-A01	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	200	Volts
Maximum RMS Voltage	VRMS	140	Volts
Maximum DC Blocking Voltage	VDC	200	Volts
Maximum DC Forward Current @TL=125°C(Note 2)	IO	20	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 ² T	663.7	A ² S
Typical Junction Capacitance (Note)	CJ	125	pF
Typical Thermal Resistance	RθJC	2.6	°C/W
	RθJL	1.2	
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	SPA2003-T-S-A01	UNITS
Maximum Instantaneous Forward Voltage at 20A DC	VF	1.0	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	@TA = 25°C	10
		@TA = 100°C	100
Maximum Full Load Reverse Current Average Full Cycle .375" (9.5mm) lead length at TL = 75°C		50	uAmps

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts
 2. Heat-sink mounted 10mm max from body
 3. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

RATING AND CHARACTERISTIC CURVES (SPA2003-T-S-A01)

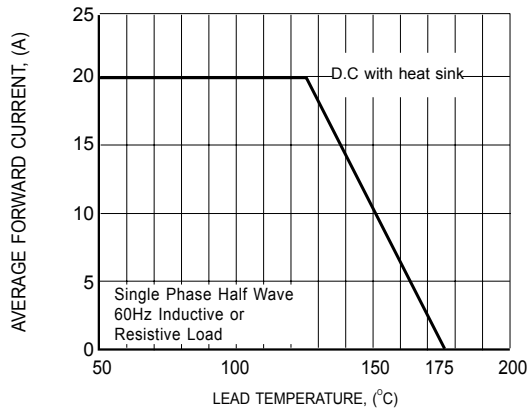


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

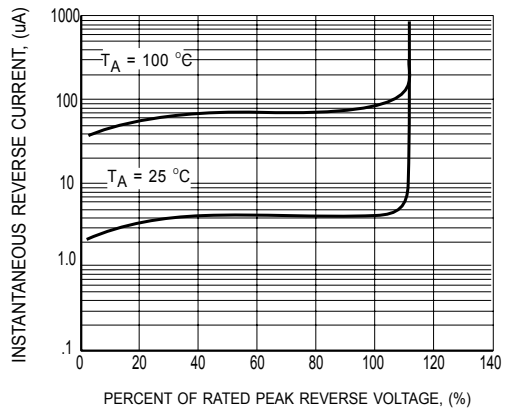


FIG.2 TYPICAL REVERSE CHARACTERISTICS

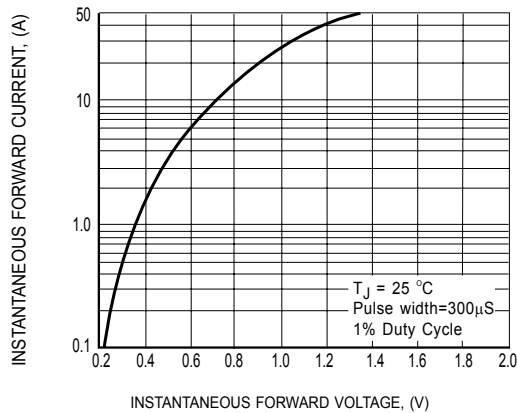


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

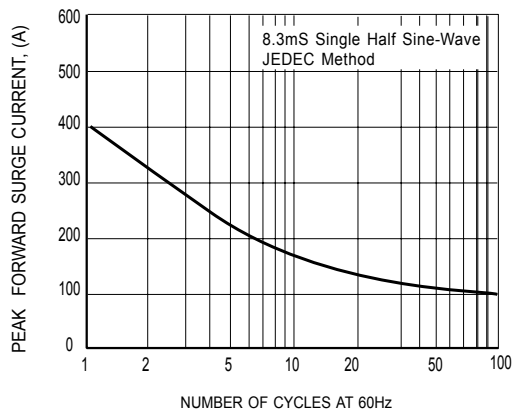
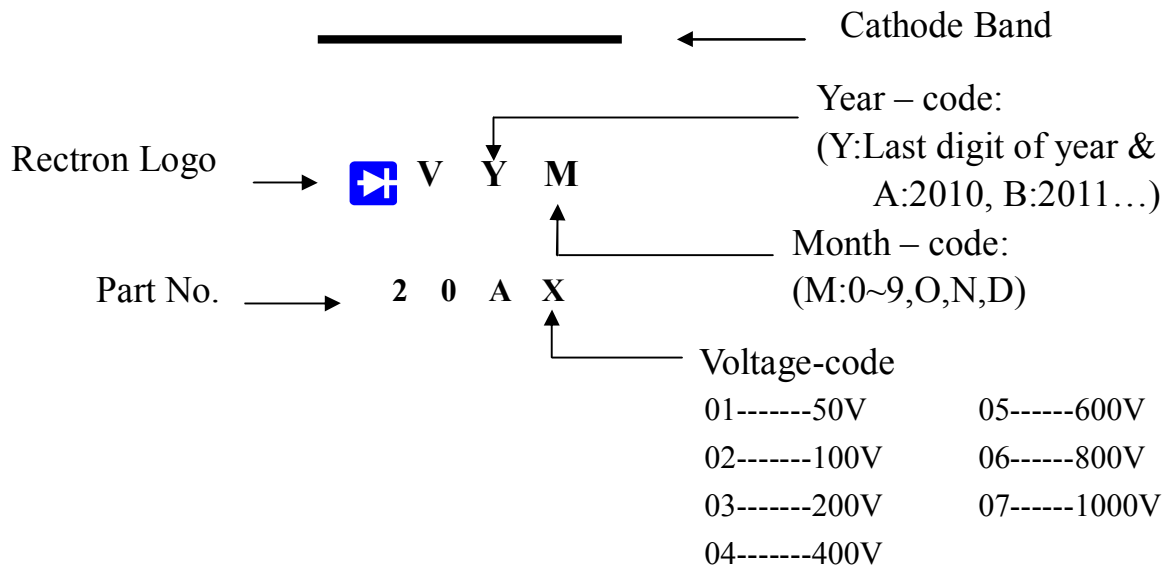


FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Marking Description



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