SPA1501 THRU SPA1505

SILICON RECTIFIER

VOLAGE RANGE 50 to 600 Volts CURRENT 15 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

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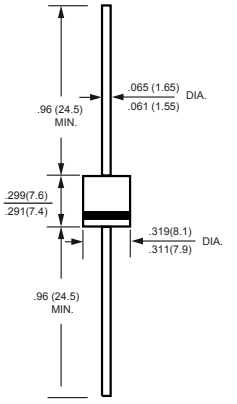

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

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

RATINGS	SYMBOL	SPA1501	SPA1502	SPA1503	SPA1504	SPA1505	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	480	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	Volts
Maximum DC Forward Current @T_L=125°C(Note 2)	I_O	15					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	400					Amps
Typical Current Squared Time	I^2T	663.7					A^2S
Typical Junction Capacitance (Note)	C_J	125					pF
Typical Thermal Resistance	$R_{\theta JA}$	7					°C/W
Operating Temperature Range	T_J	175(T_j≤200°C in Bypass Mode)					°C
Storage Temperature Range	T_{STG}	-55 to +175					°C

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

CHARACTERISTICS		SYMBOL	SPA1501	SPA1502	SPA1503	SPA1504	SPA1505	UNITS
Maximum Instantaneous Forward Voltage at 15A DC		V_F	1.0					Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	10					uAmps
	@T_A = 100°C		100					
Maximum Full Load Reverse Current Average Full Cycle .375" (9.5mm) lead length at T_L = 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

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RATING AND CHARACTERISTIC CURVES (SPA1501 THRU SPA1505)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

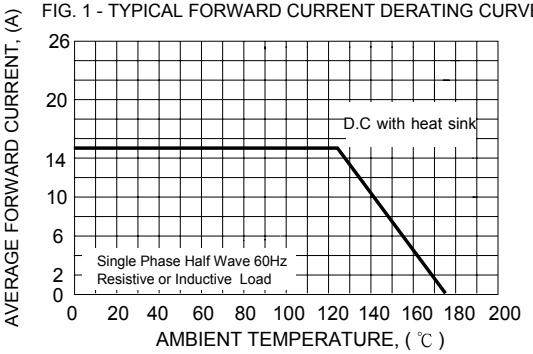


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

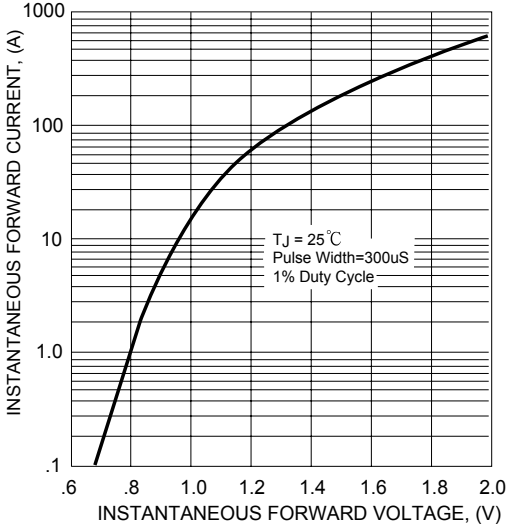


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

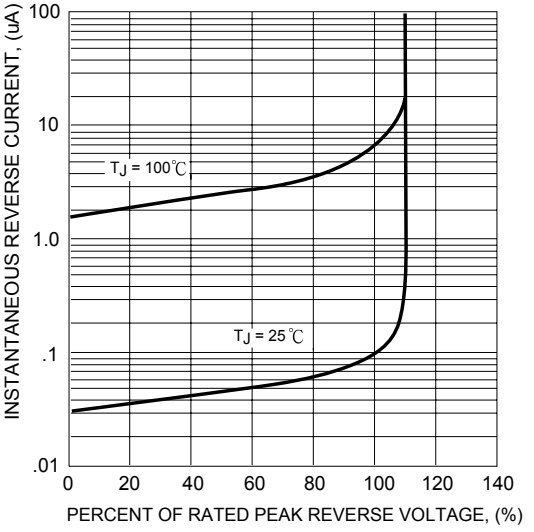


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

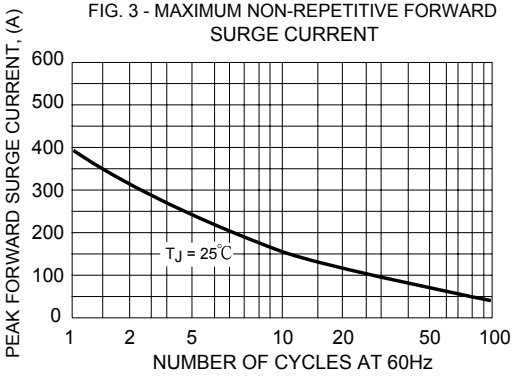
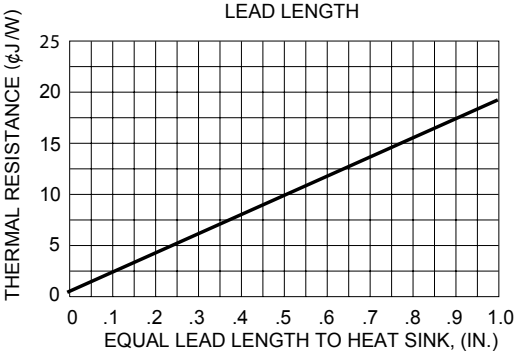
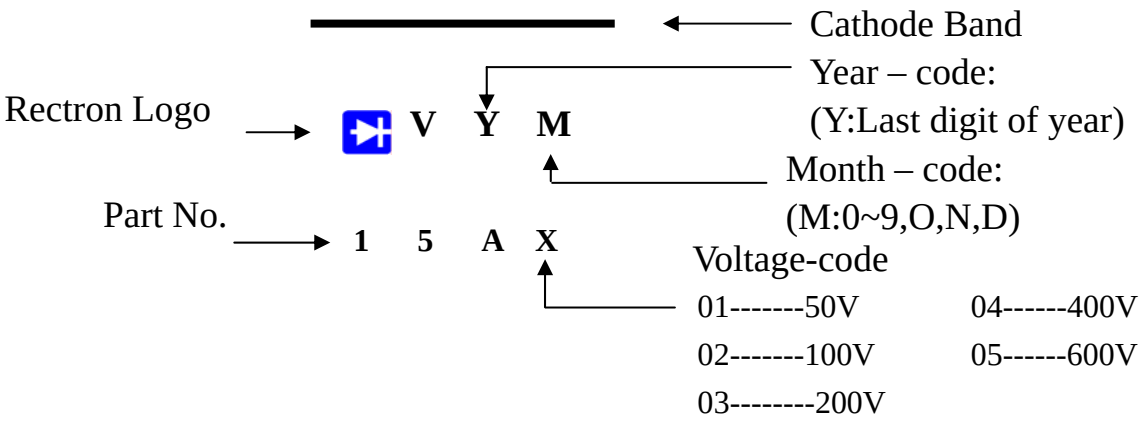


FIG. 5 - TYPICAL THERMAL RESISTANCE VS LEAD LENGTH



Marking Description



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