



THE DATASHEET OF RS1M



Surface Mount Fast Switching Rectifier

Features

- Low profile surface mounted package
- Fast recovery time for high efficiency
- Glass passivated junction
- Plastic package has underwriters laboratory flammability classification 94 V-0
- High temperature soldering: 250 °C / 10 seconds at terminals
- RoHS compliant



SMA

Maximum Ratings ($T_{Ambient}=25^{\circ}C$ unless noted)

Symbol	Description	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Unit	Conditions
VRRM	Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Maximum RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
IAV	Maximum Average Forward Rectified Current	1.0							A	TA=50°C
IFSM	Peak Forward Surge Current	30							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)

Note: Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted)

Symbol	Description	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage	1.3							V	I _F at 1.0 A
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5							μA	TA = 25 °C
		100								TA = 125 °C
t_{rr}	Typical Reverse Recovery Time	150			250	500		nS	I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	
C_J	Typical Junction Capacitance	10				7		pf	Measured at 1.0 MHz and Applied V _r = 4.0 volts.	
R_{θ-JL}	Maximum Thermal Resistance	32							° C/W	Mounted on 0.2" x 0.2" (5mmx5mm) copper pad area
R_{θ-JA}		105								
T_J, T_{STG}	Operating Junction and Storage Temperature Range	-55 to 150							° C	

Note: Single phase half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Typical Characteristics Curves

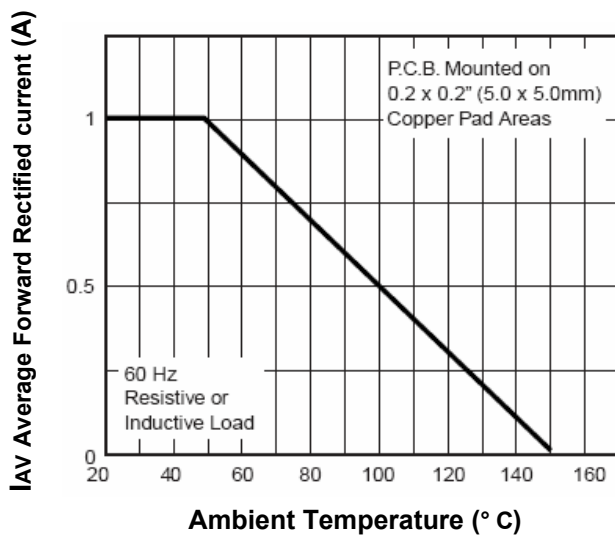


Fig.1- Forward Current Derating Curve

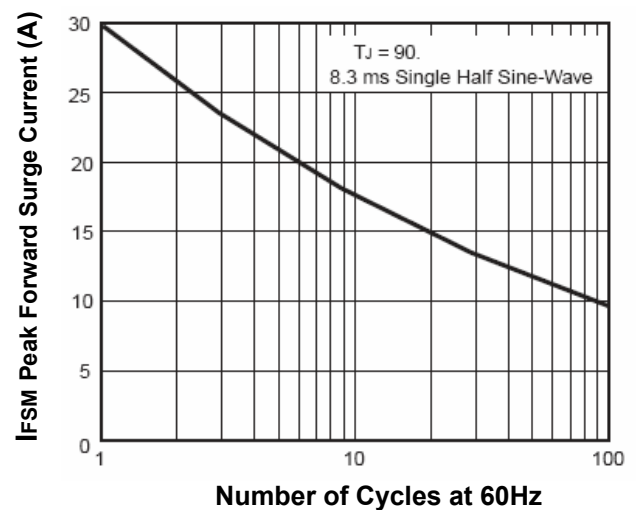


Fig.2- Max. Non-Repetitive Forward Surge Current

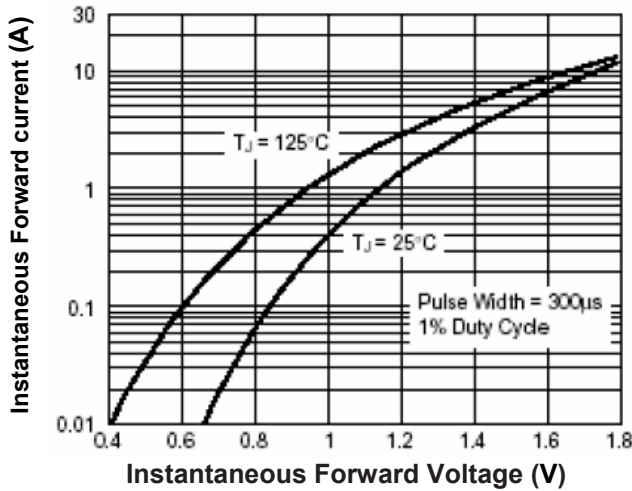


Fig.3- Typical Instantaneous Forward Characteristics

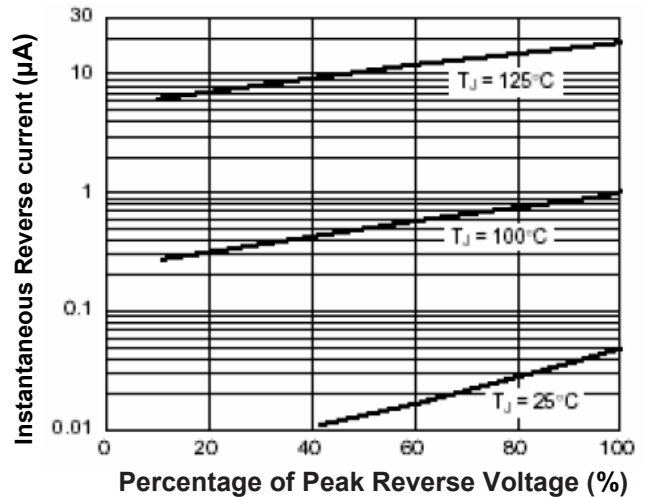


Fig.4- Typical Reverse Characteristics

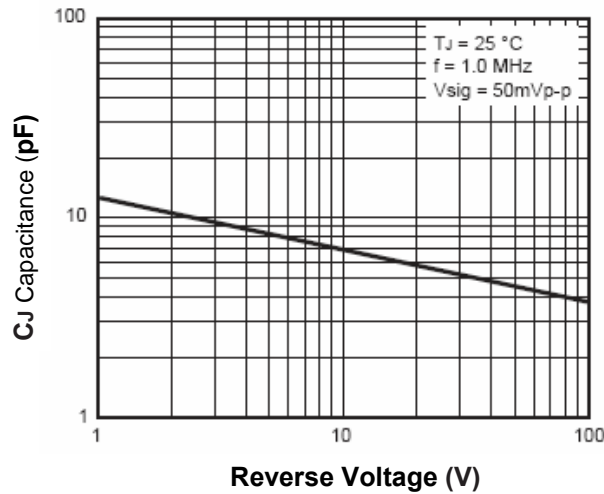
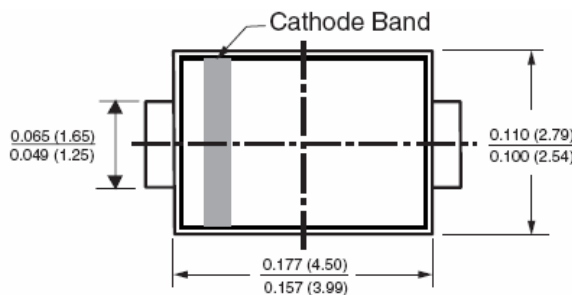
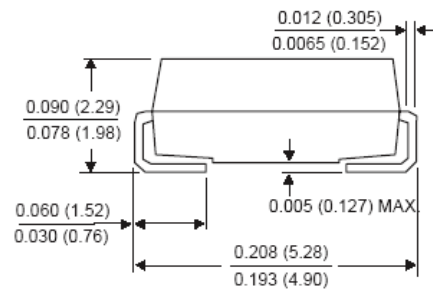


Fig.5- Junction Capacitance

Dimensions in inch (mm)



DO214AC (SMA)



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