

1.0A Surface Mount Rectifier

Features

- Low profile surface mounted package
- Glass passivated junction
- Plastic package has underwriters laboratory flammability classification 94 V-0
- High temperature soldering: 250 °C / 10 seconds at terminals



Mechanical Data

Case:	SMA molded plastic
Terminals:	Solder plated, solderable per MIL-STD-750, Method 2026
Polarity:	cathode end indicated by color band
Weight:	0.002 Ounce, 0.064 gram

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

Symbol	Description	M2	M3	M4	M5	M6	M7	Unit	Conditions
VRRM	Maximum Repetitive Peak Reverse Voltage	100	200	400	600	800	1000	V	
VRMS	Maximum RMS Voltage	70	140	280	420	560	700	V	
VDC	Maximum DC Blocking Voltage	100	200	400	600	800	1000	V	
I_{AV}	Maximum Average Forward Rectified Current	1.0						A	
I_{FSM}	Peak Forward Surge Current	40				30		A	8.3ms single half sine-wave superimposed on rated load (JEDEC method) TL=110°C
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%

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M2 - M7

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

Symbol	Description	M2	M3	M4	M5	M6	M7	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage	1.1						V	I_F at 1.0 A
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5						μA	$T_A = 25^{\circ}C$
		50							$T_A = 125^{\circ}C$
t_{rr}	Typical Reverse Recovery Time	1.8						μS	$I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A$
C_J	Typical Junction Capacitance	12						pf	Measured at 1.0 MHz and Applied $V_r = 4.0$ volts.
$R_{\theta-JL}$	Maximum Thermal Resistance	27				30		$^{\circ}C/W$	Mounted on 0.2" x 0.2" (5mmx5mm) copper pad area
$R_{\theta-JA}$		75				85			

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

Typical Characteristics Curves

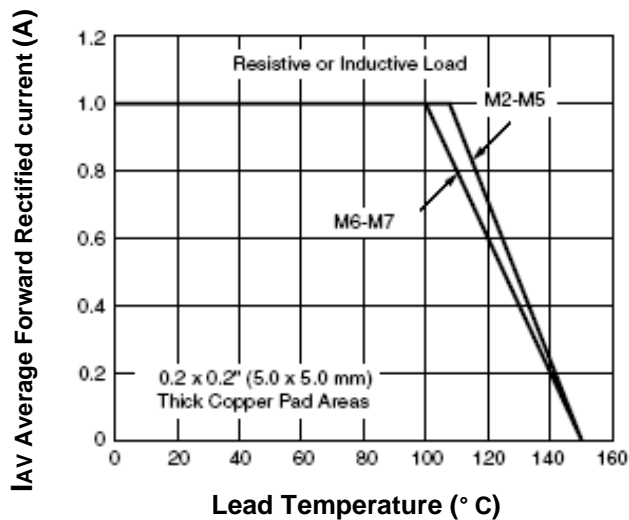


Fig.1- Forward Current Derating Curve

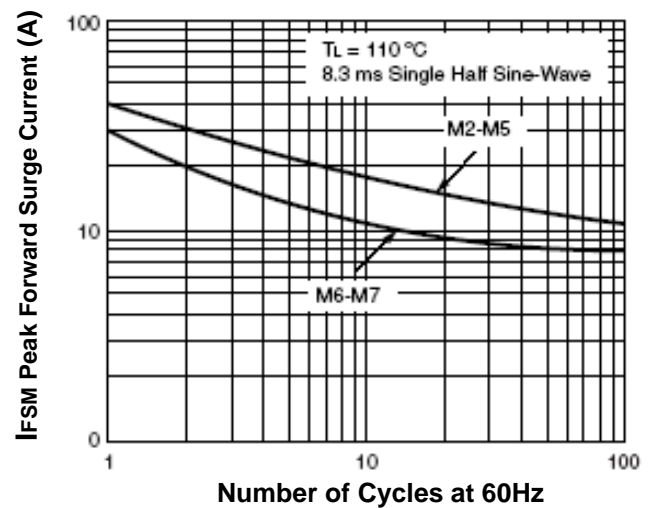


Fig.2- Max. Non-Repetitive Forward Surge Current

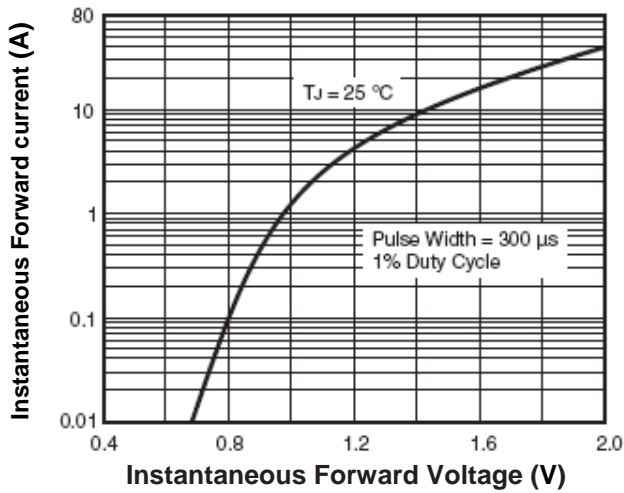


Fig.3- Typical Instantaneous Forward Characteristics

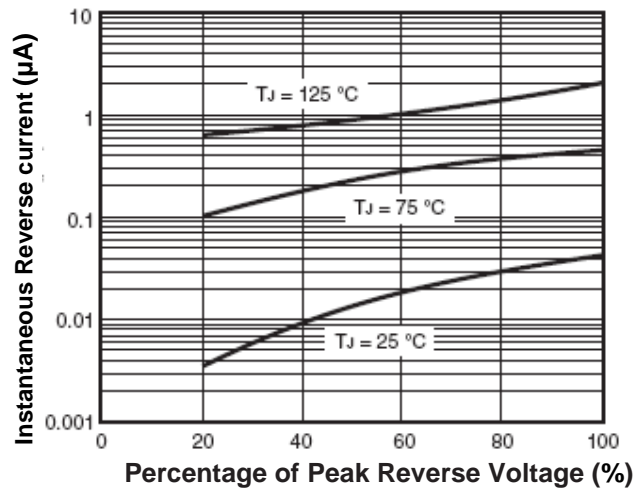


Fig.4- Typical Reverse Characteristics

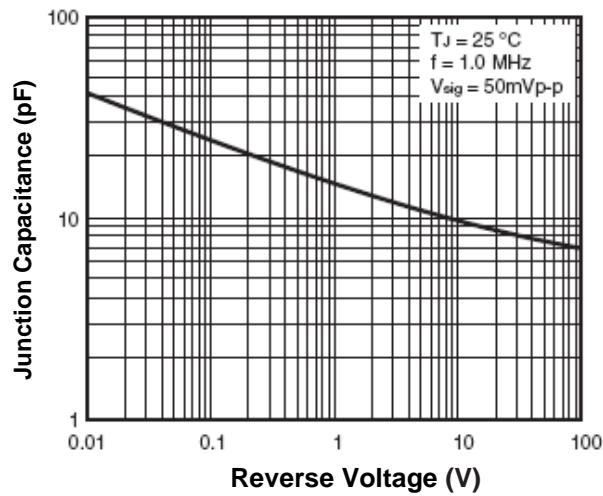
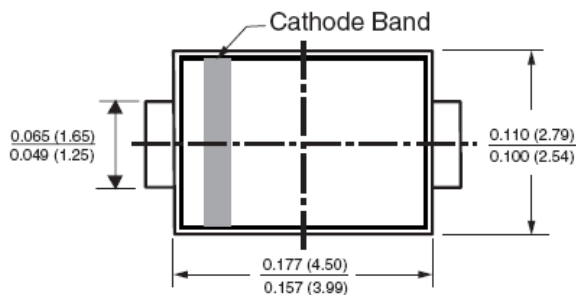
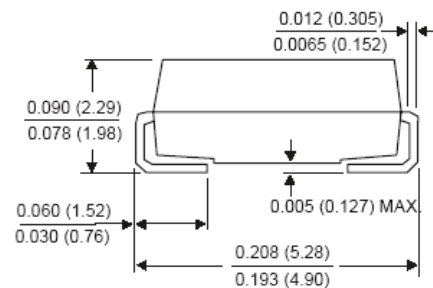


Fig.5- Junction Capacitance

Dimensions in inch (mm)



DO214AC (SMA)



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