

FR1A-FR1M

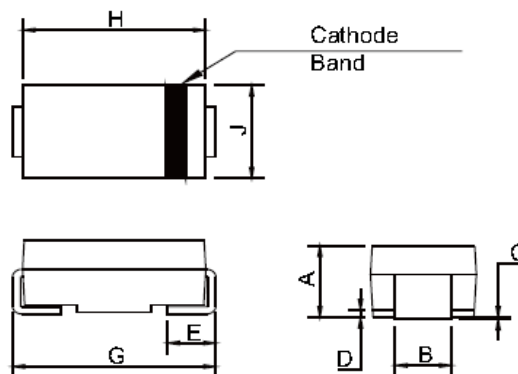
1.0A SURFACE MOUNT FAST RECOVERY RECTIFIER

Features:

- Fast switching for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- Glass passivated chip junction

Mechanical Data:

- Case: JEDEC DO-214AC molded plastic body over passivated chip
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.07 grams

Mechanical Dimensions:


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.067	0.091	1.70	2.31	
B	0.051	0.067	1.29	1.70	
C	0.002	0.008	0.05	0.20	
D	—	0.020	—	0.51	
E	0.030	0.080	0.76	1.52	
G	0.185	0.209	4.70	5.31	
H	0.157	0.181	4.00	4.60	
J	0.086	0.110	2.18	2.79	

SMA

Marking Diagram:

Where XXXXX is YYWWL



FR1A	= Part Name
YY	= Year
WW	= Week
L	= Lot Number

Cautions: Molding resin
 Epoxy resin UL:94V-0

Ordering Information

Device	Package	Shipping
FR1A-FR1M	SMA (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	FR1A	FR1B	FR1D	FR1G	FR1J	FR1K	FR1M	Unit
Peak Repetitive Reverse Voltage DC Blocking Voltage	V_{RRM} V_{DC}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average forward rectified output current @ $T_A = 90^\circ\text{C}$	$I_{(AV)}$	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.30							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	5.0 50.0							μA
Reverse recovery time (Note 1)	t_{rr}	150				250	500		ns
Typical Junction Capacitance (Note 2)	C_J	15							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50.0							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length, P.C.B. mounted

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FIG. 1- FORWARD CURRENT DERATING CURVE

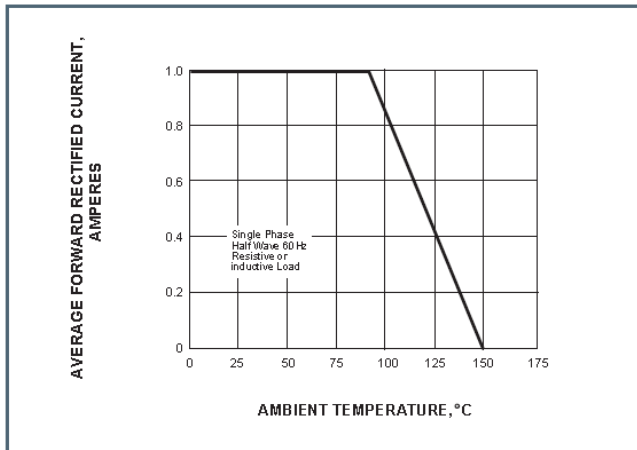


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

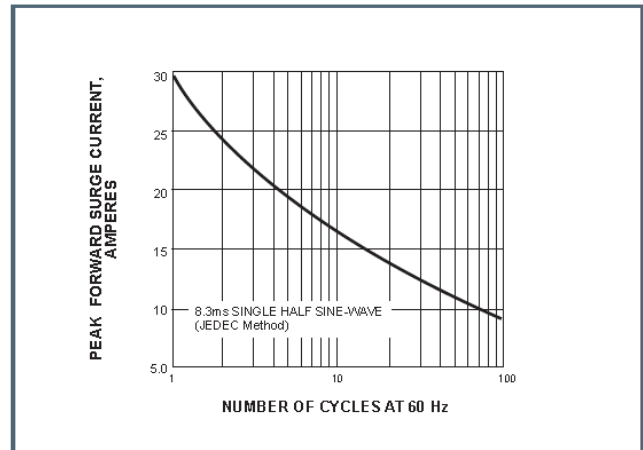


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

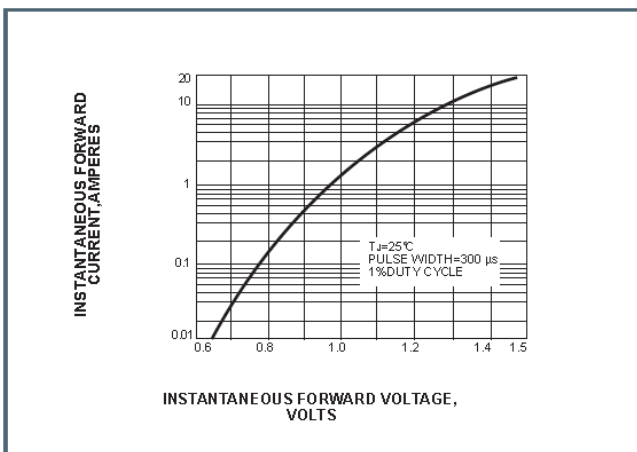
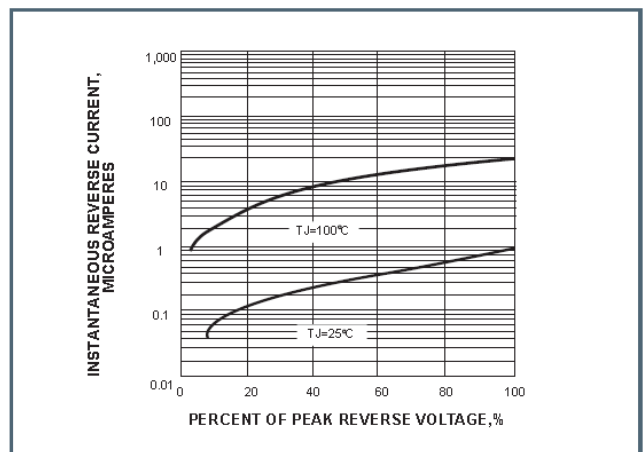


FIG. 4-TYPICAL REVERSE CHARACTERISTICS





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