

FR3A-FR3M FAST RECOVERY RECTIFIERS

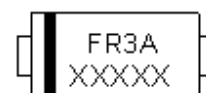
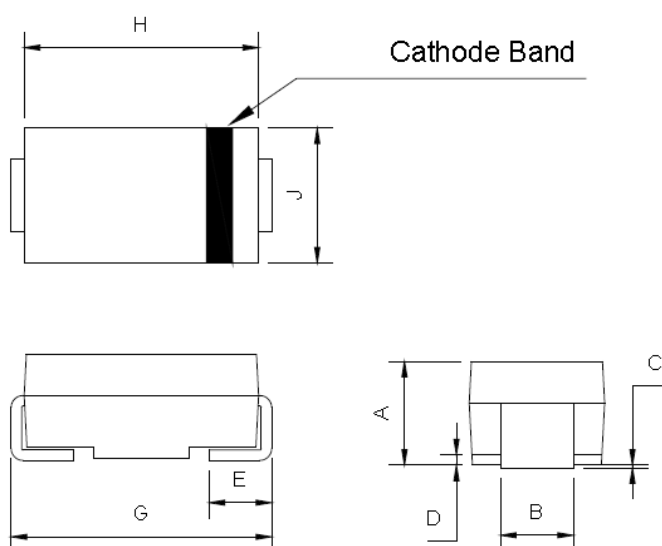
Surface Mount - 3A

Features:

- Fast switching for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 260°C, 40s
- 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: 0.23 grams


FR3A
Mechanical Dimensions: In mm / Inches


DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.108	0.128	2.75	3.25	
C	0.002	0.008	0.051	0.203	
D	—	0.02	—	0.51	
E	0.030	0.060	0.76	1.52	
G	0.305	0.320	7.75	8.13	
H	0.260	0.280	6.60	7.11	
J	0.220	0.245	5.59	6.22	

SMC

MARKING, MOLDING RESIN

Marking for FR3A/B/C/D/G/J/M, 1st row FR3A/B/C/D/G/J/M, 2nd row YYWWL

Where YY is the manufacture year

WW is the manufacture week code

L is the wafer's Lot Number



FR3A-FR3M

Technical Data
Data Sheet N1742, Rev. A

Green Products

Ordering Information:

Device	Package	Shipping
FR3A-FR3M	SMC (Pb-Free)	3000pcs / 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

Rating at 25°C ambient temperature unless otherwise specified

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

Characteristic	Symbol	FR3A	FR3B	FR3D	FR3G	FR3J	FR3K	FR3M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	
Maximum average forward rectified current at $T_A = 75^\circ\text{C}$	$I_{(AV)}$	3.0							V
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100.0							A
Maximum instantaneous forward voltage at 3.0A	V_F	1.3							V
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	5.0 50.0							μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	150			250		500		ns
Typical junction capacitance (Note 2)	C_J	60.0							pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	50.0							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150							$^\circ\text{C}$

- Note:**
1. Measured with $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$,
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC
 3. Mounted on 0.31" x 0.31" (8.0 mm x 8.0 mm) copper pad areas

FIG.1-FORWARD CURRENT DERATING CURVE

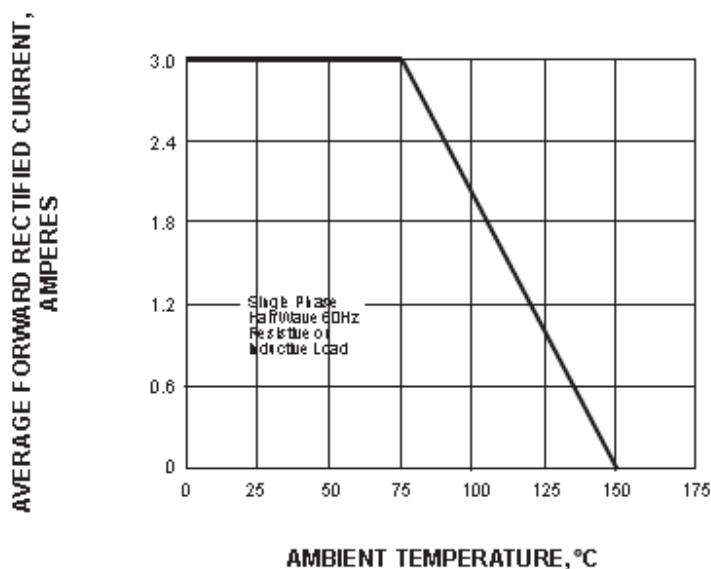


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

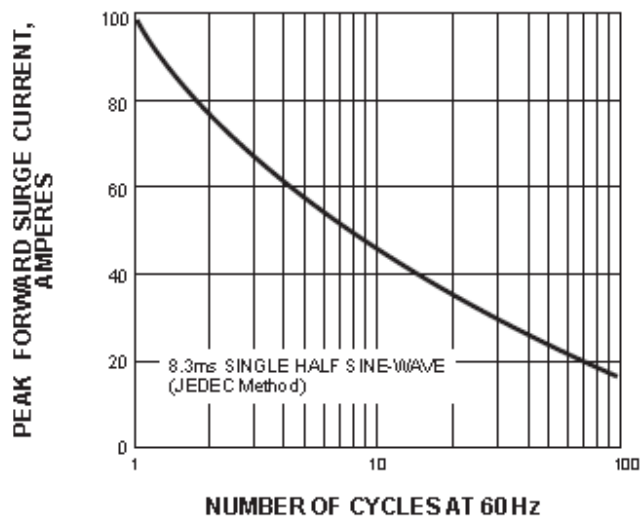


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

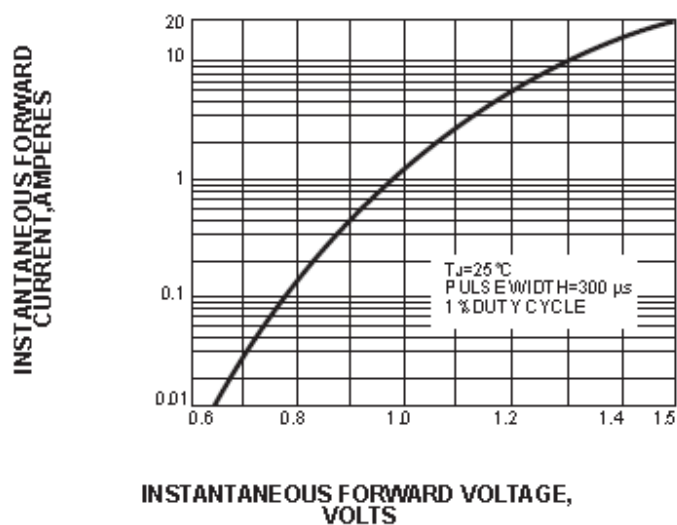
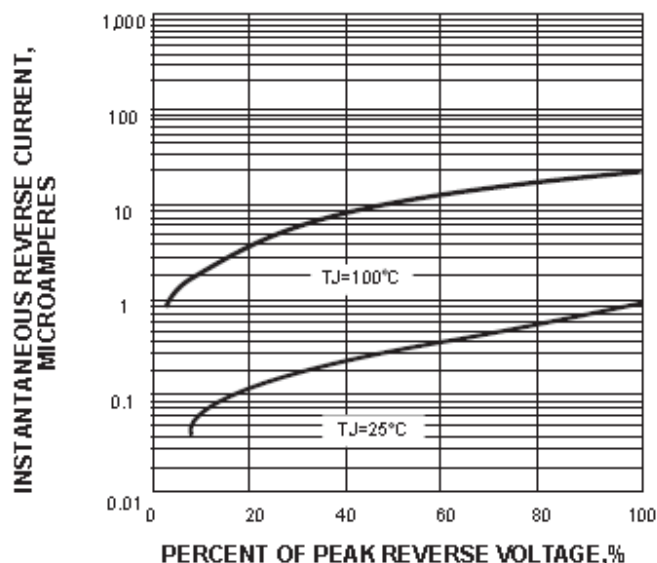


FIG.4-TYPICAL REVERSE CHARACTERISTICS





FR3A-FR3M

Technical Data
Data Sheet N1742, Rev. A

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