FAST RECOVERY SURFACE MOUNT RECTIFIERS

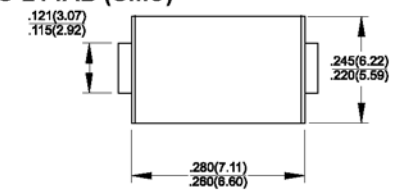
PRODUCT SUMMARY

Reverse Voltage 50 to 1000 Volts
Forward current 3.0 Amperes

FEATURES

For surface mounted application
Glass passivated junction chip
Built-in strain relief, ideal for automated placement
Plastic material used carries Underwriters Laboratory
Classification 94V-O
Fast switching for high efficiency
High temperature soldering:
250^{o}C /10 seconds at terminals

DO-214AB (SMC)



Dimensions in inches and (millimeters)

MECHANICAL DATA

Cases: Molded plastic
Terminals: Solder plated
Polarity: Indicated by cathode band
Weight: 0.007 ounce, 0.21 gram

Pb-free; RoHS-compliant

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ^{o}C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Parameter	Symbols	GR3A	GR3B	GR3D	GR3G	GR3J	GR3K	GR3M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current See Fig. 1 @ T_L=75°C	$I_{(AV)}$	3.0							Amps
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100.0							Amps
Maximum instantaneous forward voltage @ 3.0A	V_F	1.3							Volts
Maximum DC reverse current @T_A=25°C at rated DC blocking voltage @T_A=125°C	I_R	10.0 250							uA
Maximum reverse recovery time (Note 1)	t_{rr}	150				250	500		nS
Typical junction capacitance (Note 2)	C_J	75							pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 15.0							°C/W
Operating temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Notes: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1 MHz and Applied V_R=4.0 Volts
3. Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. with 0.3" x 0.3" (8.0 x 8.0 mm) Copper Pad Areas.

RATINGS AND CHARACTERISTIC CURVES

(T_A=25 ^{o}C unless otherwise noted)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

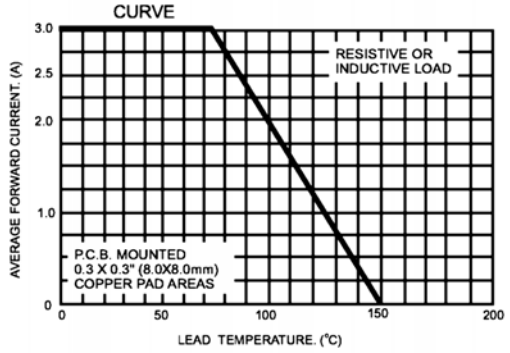


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

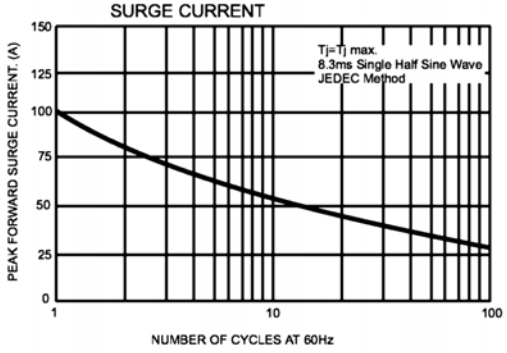


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

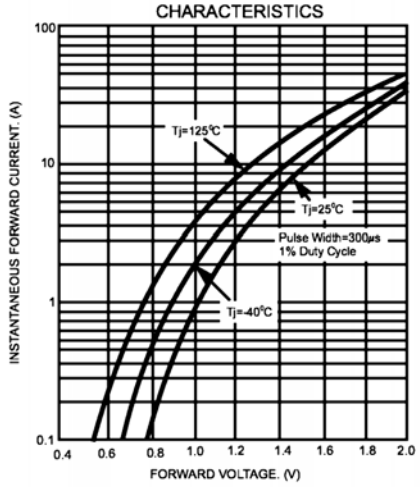


FIG.4- TYPICAL REVERSE CHARACTERISTICS

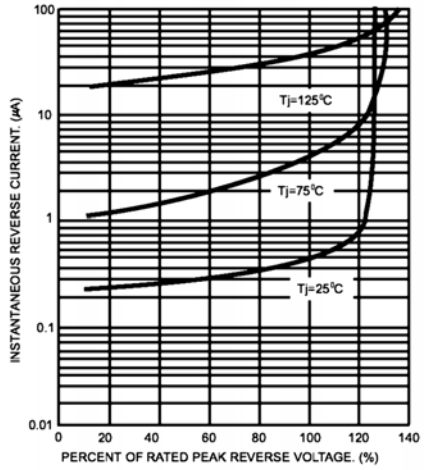


FIG.5- TYPICAL JUNCTION CAPACITANCE