



# GR3A THRU GR3M

## SURFACE MOUNT GLASS PASSIVATED JUNCTION

### FAST SWITCHING RECTIFIER

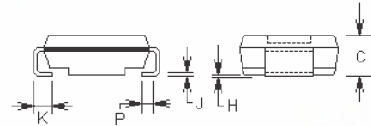
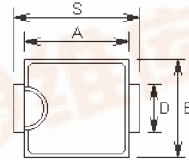
Reverse Voltage - 50 to 1000 Volts

Forward Current - 3.0 Amperes

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mount applications
- Low profile package
- Built-in strain relief, ideal for automated placement
- Fast switching for high efficiency
- Easy pick and place
- Glass passivated chip junction
- High temperature soldering: 250°C/10 seconds at terminals

### SMC



### Mechanical Data

- **Case:** SMC 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:** 0.007 ounce, 0.25 gram

DIM	DIMENSIONS				Note
	inches		mm		
	Min.	Max.	Min.	Max.	
A	0.280	0.280	6.80	7.11	
B	0.220	0.240	5.59	6.10	
C	0.075	0.095	1.90	2.41	
D	0.115	0.121	2.92	3.07	
H	0.0020	0.0060	0.051	0.152	
J	0.006	0.012	0.15	0.30	
K	0.030	0.050	0.76	1.27	
P	0.020 REF		0.51 REF		
S	0.305	0.320	7.75	8.13	

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	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 at $T_L=75^\circ\text{C}$	$I_{(AV)}$				3.0				Amps
Peak forward surge current 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method) $T_L=75^\circ\text{C}$	$I_{FSM}$				100.0				Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$				1.30				Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$				10.0 250.0				$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$T_{rr}$	150			250		500		nS
Typical junction capacitance (Note 2)	$C_J$				60.0				$\mu\text{F}$
Typical thermal resistance (Note 3)	$R_{\theta JA}$ $R_{\theta JL}$				15.0 50.0				$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$				-55 to +150				$^\circ\text{C}$

#### Notes:

(1) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_L=0.25\text{A}$

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

(3) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3X0.3" (8.0X8.0mm) copper pad areas



# RATINGS AND CHARACTERISTIC CURVES

