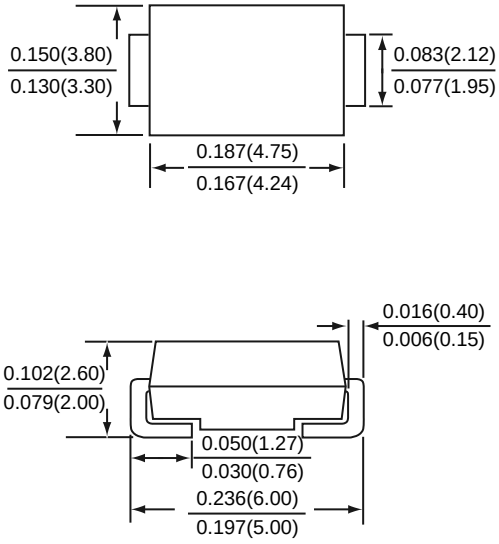
RGF30A THRU RGF30M

SURFACE MOUNT GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts *Forward Current - 3.0 Amperes*

PATENTED

DO-214AA



*Dimensions in inches and (millimeters)

SUPEREX II™



FEATURES

* GPRC (Glass Passivated Rectifier Chip) inside
* Glass passivated cavity-free junction
* Ideal for surface mount automotive applications
* Fast switching for high efficiency
* Built-in strain relief
* Easy pick and place
* High temperature soldering guaranteed: 260°C/10 seconds, at terminals
* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

MECHANICAL DATA

Case : JEDEC DO-214AA molded plastic over passivated chip
Terminals : Solder plated , solderable per MIL-STD-750, Method 2026
Polarity : Color band denotes cathode end
Mounting Position : Any
Weight : 0.004 ounes , 0.12 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.	*SYMBOLS*	*RGF30*										*UNITS*
		A	***B***	***D***	***G***	***J***	***JA***	***K***	***KA***	***M***	***MA***	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	600	800	800	1000	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	420	560	560	700	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	600	800	800	1000	1000	Volts
Maximum average forward rectified current at T_A=75°C	$I_{(AV)}$	3.0										Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	115										Amps
Maximum instantaneous forward voltage at 3.0 A	V_F	1.3										Volts
Maximum full load reverse current, full cycle average , 0.375" (9.5mm) lead lengths at T_A=55°C	$I_{R(AV)}$	100										uA
Maximum DC reverse current at rated DC blocking voltage T_A=25°C T_A=125°C T_A=150°C	I_R	5 50 120										uA
Maximum reverse recovery time (NOTE 1)	trr	150				250	150	500	300	500	300	nS
Typical junction capacitance (NOTE 2)	C_J	60										pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	15 50										°C / W
Operating junction and storage temperature range	T_J,T_{STG}	-65 to +175										°C

NOTES : (1) Reverse recovery test condition : IF 0.5A, IR=1.0A, Irr=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

RATINGS AND CHARACTERISTIC CURVES RGF30A THRU RGF30M

FIG.1 - FORWARD CURRENT DERATING CURVE

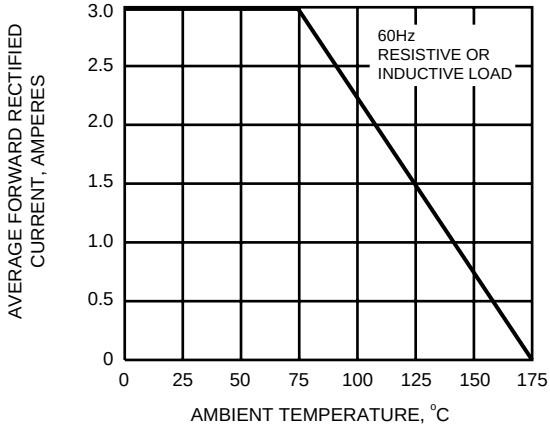


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

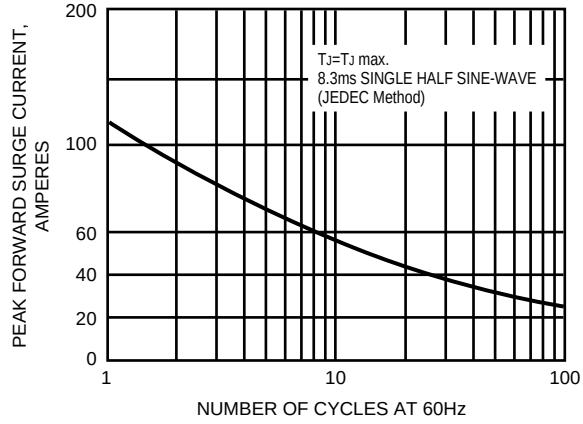


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

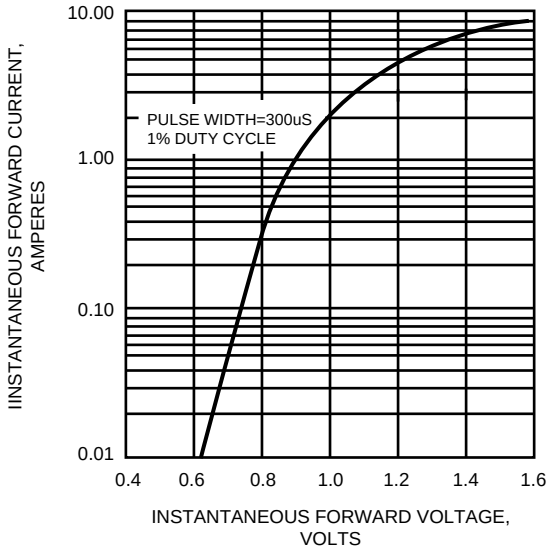


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

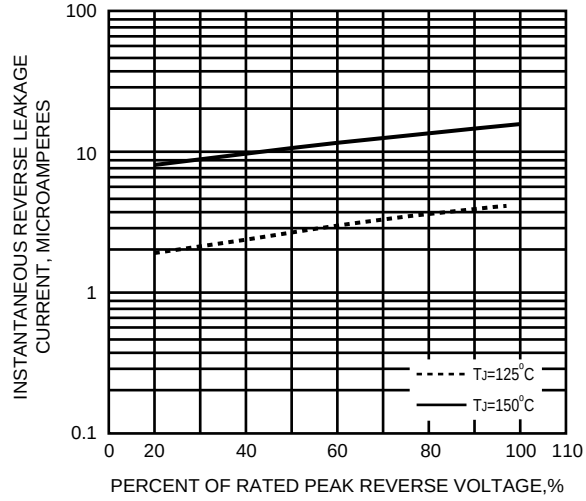


FIG.5 - TYPICAL JUNCTION CAPACITANCE

