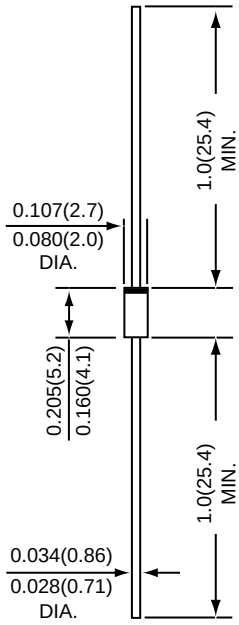
RGP10A THRU RGP10M

SINTERED GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 Volts *Forward Current - 1.0 Ampere*

PATENTED

DO-204AL



*Dimensions in inches and (millimeters)

SUPEREX II™

FEATURES

* GPRC (Glass Passivated Rectifier Chip) inside
* Glass passivated cavity-free junction
* Capable of meeting environmental standards of MIL-S-19500
* For use in high frequence rectifier circuits
* Fast switching for high efficiency
* 1.0 Ampere operation at T_A=55°C with no thermal runaway
* Typical IR less than 0.1uA
* High temperature soldering guaranteed: 260°C/10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3 kg) tension
* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

MECHANICAL DATA

Case : JEDEC DO-204AL molded plastic over glass body
Terminals : Plated axial leads , solderable per MIL-STD-750, Method 2026
Polarity : Color band denotes cathode end
Mounting Position : Any
Weight : 0.012 ounes , 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.	*SYMBOLS*	***RGP10***										*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 0.375" (9.5mm) lead length (SEE FIG.1)	$I_{(AV)}$	1.0										Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30										Amps
Maximum instantaneous forward voltage at 1.0 A	V_F	1.3										Volts
Maximum DC reverse current at rated DC blocking voltage T_A=25°C T_A=125°C T_A=150°C	I_R	5 30 50										uA
Maximum reverse recovery time (NOTE 1)	trr	150				250	150	500	300	500	300	nS
Typical junction capacitance (NOTE 2)	C_J	15										pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	55										°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 at 0.375" (9.5mm) lead lengths, P.C.B. mounted.

RATINGS AND CHARACTERISTIC CURVES RGP10A THRU RGP10M

FIG.1 - FORWARD CURRENT DERATING CURVE

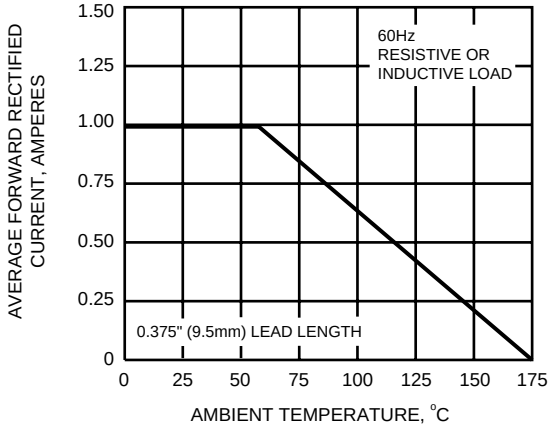


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

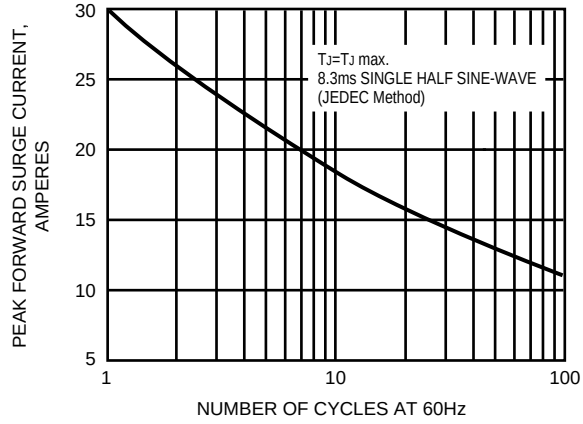


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

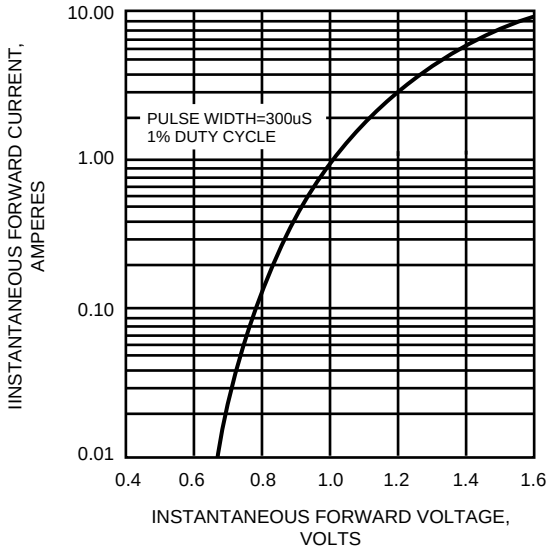


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

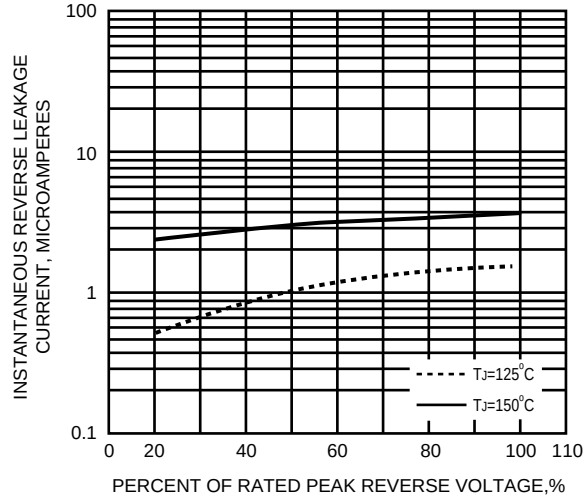


FIG.5 - TYPICAL JUNCTION CAPACITANCE

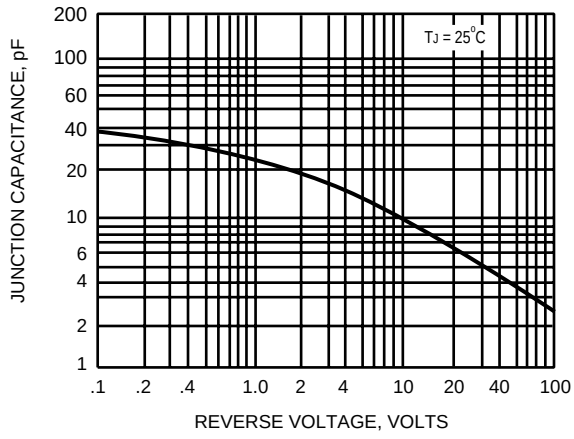


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE