

FEATURES

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Capable of meeting environmental standards of MIL-S-19500
- For use in high frequency rectifier circuits
- Fast switching for high efficiency
- Cavity-free glass passivated junction
- 0.5 Ampere operation at $T_A=55^{\circ}\text{C}$ with no thermal runaway
- Typical I_R less than $0.2\mu\text{A}$
- High temperature soldering guaranteed: $350^{\circ}\text{C}/10$ seconds, $0.375"$ (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

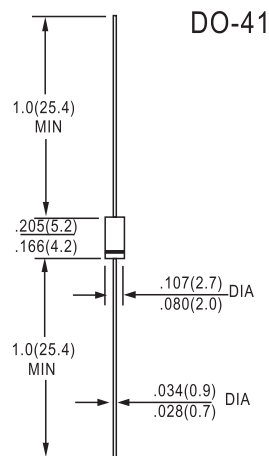
Case: Molded plastic over glass body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 oz., 0.3 g



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	RGP02-12E	RGP02-14E	RGP02-16E	RGP02-18E	RGP02-20E	Units
Maximum repetitive peak reverse voltage	V_{RRM}	1200	1400	1600	1800	2000	V
Maximum RMS voltage	V_{RMS}	840	980	1120	1260	1400	V
Maximum DC blocking voltage	V_{DC}	1200	1400	1600	1800	2000	V
Maximum average forward rectified current $0.375"$ (9.5mm) lead length at $T_A=55^{\circ}\text{C}$	$I_F(AV)$	0.5					A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	20					A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$	65 30					$^{\circ}\text{C}/\text{W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175					$^{\circ}\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 0.1A	V_F	1.8	V
Maximum DC reverse current $T_A=25^{\circ}\text{C}$ at rated DC blocking voltage $T_A=125^{\circ}\text{C}$	I_R	5.0 50	μA
Maximum reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	t_{rr}	300	ns
Typical junction capacitance at 4.0V, 1MHz	C_J	5.0	pF

Note:

(1) Thermal resistance from junction to ambient and from junction to lead at $0.375"$ (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES RGP02-12E THRU RGP02-20E

Fig. 1 — Forward Current Derating Curve

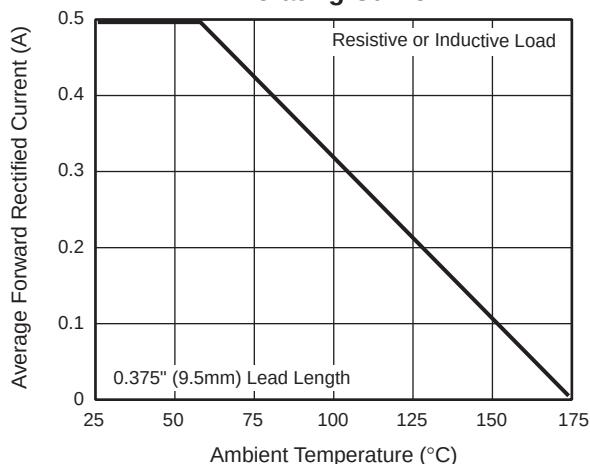


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

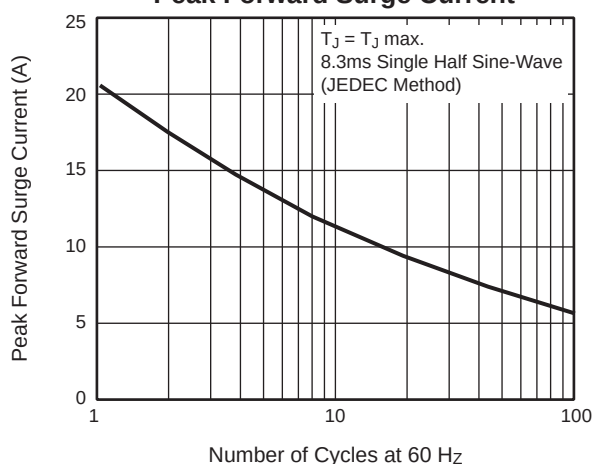


Fig. 3 — Typical Instantaneous Forward Characteristics

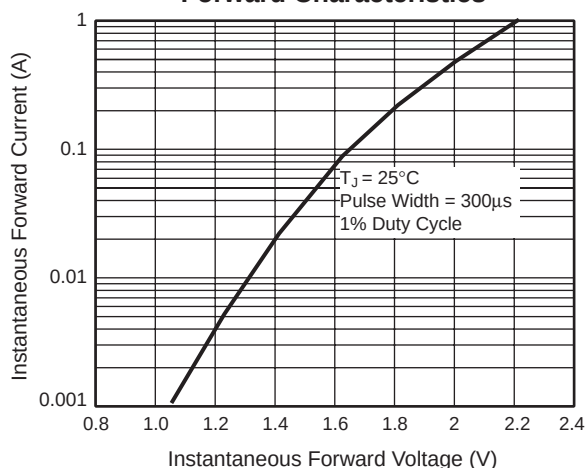


Fig. 4 — Typical Reverse Characteristics

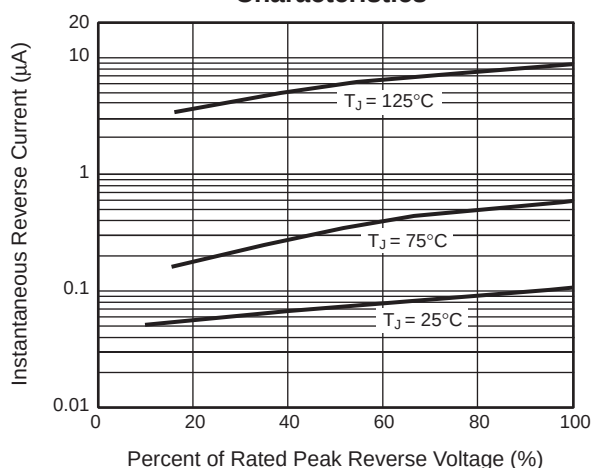


Fig. 5 — Typical Junction Capacitance

