

RGP02-12E // 20E

PRV : 1200 - 2000 Volts
Io : 0.5 Ampere

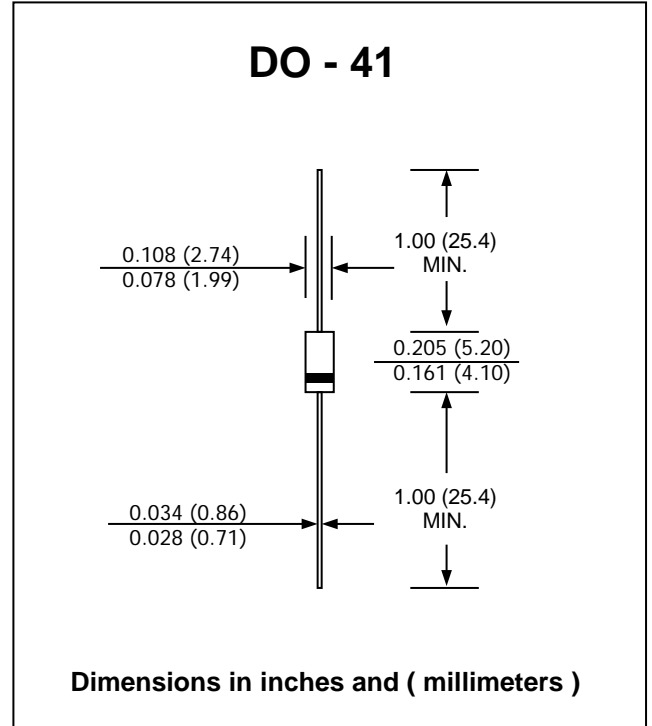
FEATURES :

- * Glass passivated junction
- * High current capability
- * High surge current capability
- * High reliability
- * Low reverse current
- * Low forward voltage drop
- * Fast switching for high efficiency
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : DO-41 Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.34 gram

FAST RECOVERY HIGH VOLTAGE RECTIFIER DIODES



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

RATING	SYMBOL	RGP02-12E	RGP02-14E	RGP02-16E	RGP02-18E	RGP02-20E	UNIT
Maximum Recurrent 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 Current 0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	0.5					A
Peak Forward Surge Current 8.3 ms. Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	20					A
Maximum Peak Forward Voltage at 0.1 Amp.	V_F	1.8					V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	I_R	5.0					μA
	$I_{R(H)}$	50					μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	300					ns
Typical Junction Capacitance (Note 2)	C_J	5.0					pf
Typical Thermal Resistance (Note 3)	$R\theta_{JA} / R\theta_{JL}$	60 / 35					$^\circ\text{C/W}$
Junction and storage Temperature Range	T_J / T_{STG}	- 65 to + 150					$^\circ\text{C}$

Notes :

- (1) Reverse Recovery Test Conditions : $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc
- (3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. Mounted

RATING AND CHARACTERISTIC CURVES (RGP02-12E - RGP02-20E)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

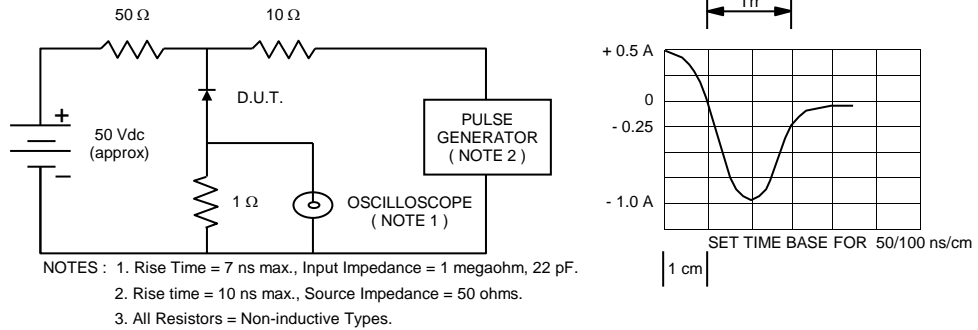


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

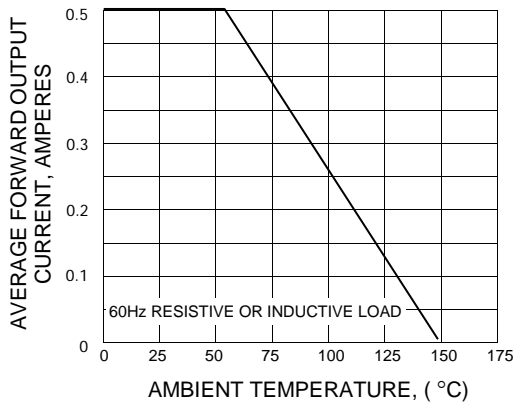


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

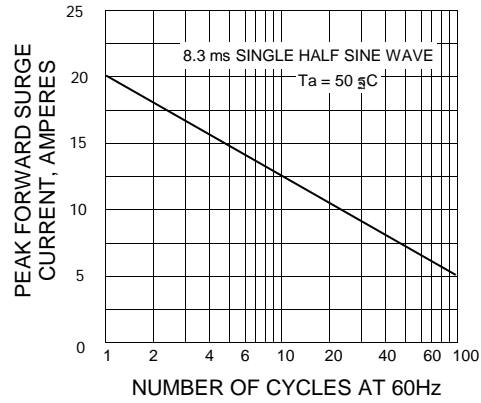


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

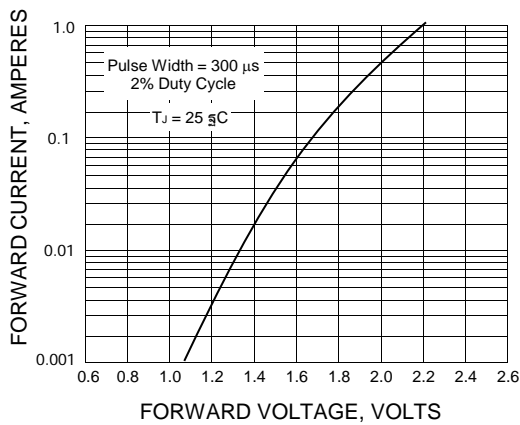


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

