

RGP02-12E // 20E

PRV : 1200 - 2000 Volts
Io : 0.5 Ampere

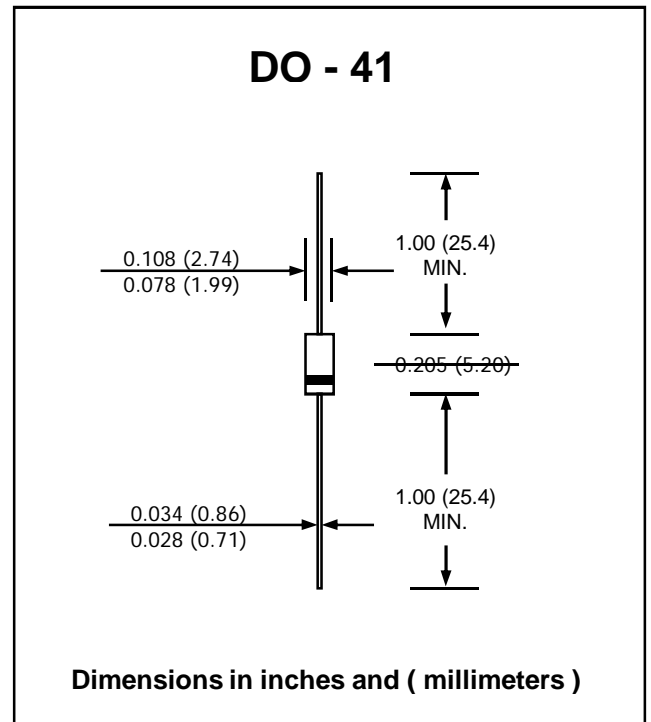
FEATURES :

- * 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

Rated 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 |
| Junction Temperature Range | T_J | - 65 to + 150 | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | 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

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

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

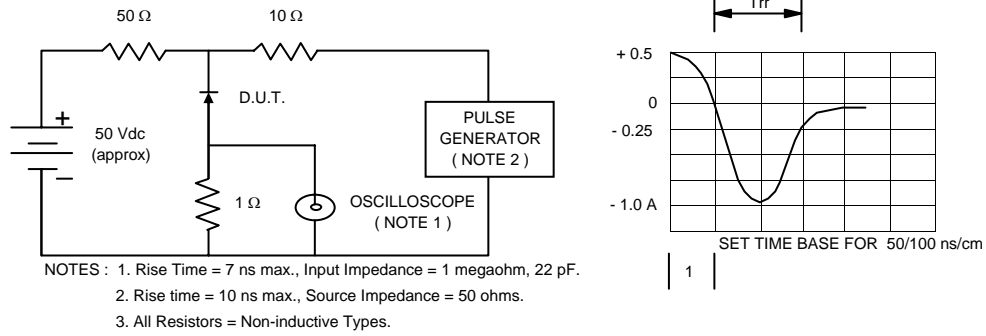


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

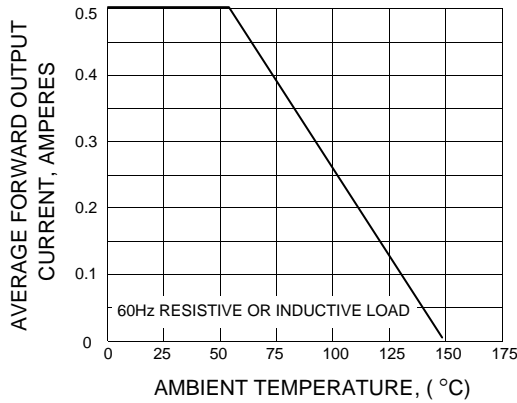


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

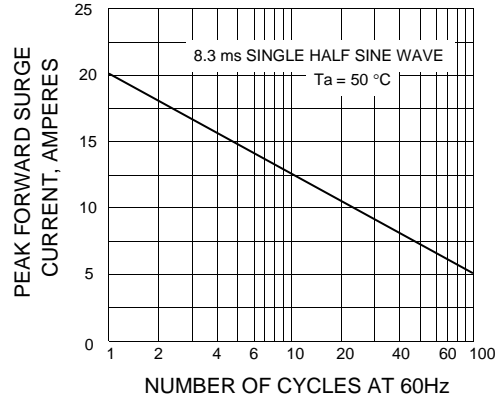


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

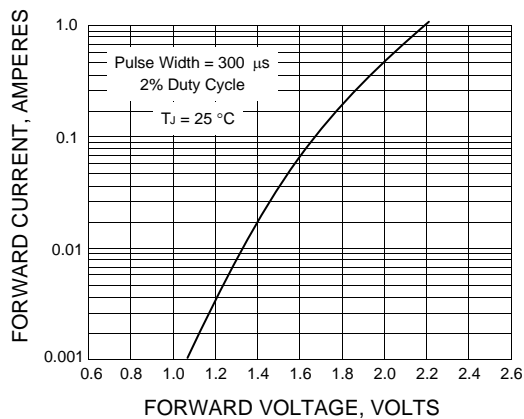


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

