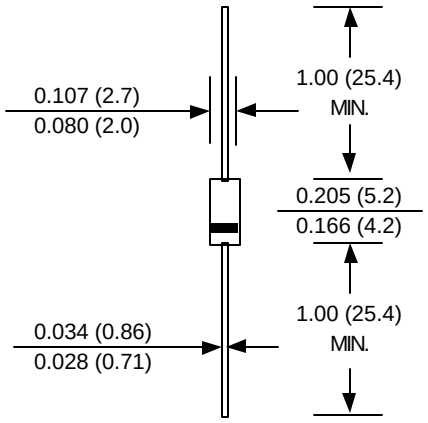
RGP02-12E // 20E

HIGH VOLTAGE FAST RECOVERY RECTIFIERS

PRV : 1200 - 2000 Volts
Io : 0.5 Ampere

DO - 41



Dimensions in inches and (millimeters)

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

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 : 0.339 gram

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	RGP 02-12E	RGP 02-14E	RGP 02-16E	RGP 02-18E	RGP 02-20E	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1200	1400	1600	1800	2000	Volts
Maximum RMS Voltage	V_{RMS}	840	980	1120	1260	1400	Volts
Maximum DC Blocking Voltage	V_{DC}	1200	1400	1600	1800	2000	Volts
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	$I_{F(AV)}$	0.5					Amps.
Peak Forward Surge Current 8.3 ms. Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	20					Amps.
Maximum Peak Forward Voltage at 0.5 Amp.	V_F	2.5					Volts
Maximum DC Reverse Current Ta = 25 °C	I_R	5.0					µA
at Rated DC Blocking Voltage Ta = 100 °C	$I_{R(H)}$	50					µA
Maximum Reverse Recovery Time (Note 1)	Trr	300					ns
Typical Junction Capacitance (Note 2)	C_J	5.0					pf
Junction Temperature Range	T_J	- 65 to + 150					°C
Storage Temperature Range	T_{STG}	- 65 to + 150					°C

Notes :

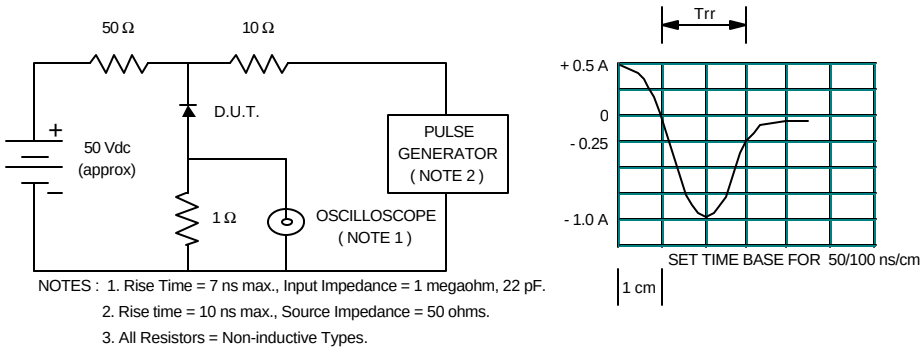
(1) Reverse Recovery Test Conditions : I_F = 0.5 A, I_R = 1.0 A, Irr = 0.25 A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}

UPDATE : APRIL 23, 1998

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

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



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

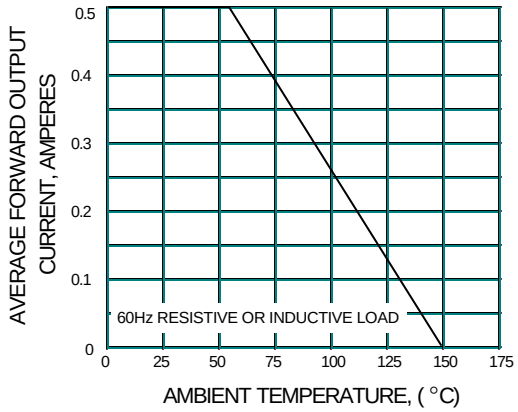


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

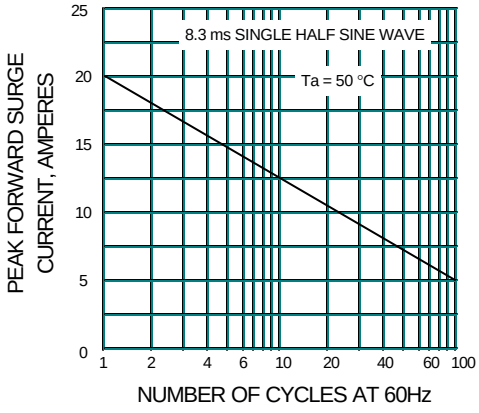


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

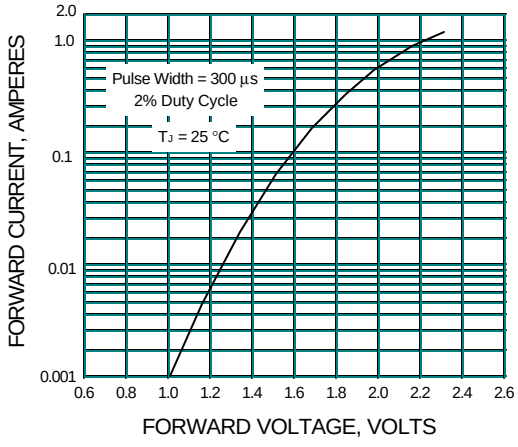


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

