

# RGP20DT

**PRV : 200 Volts**  
**Io : 2.0 Amperes**

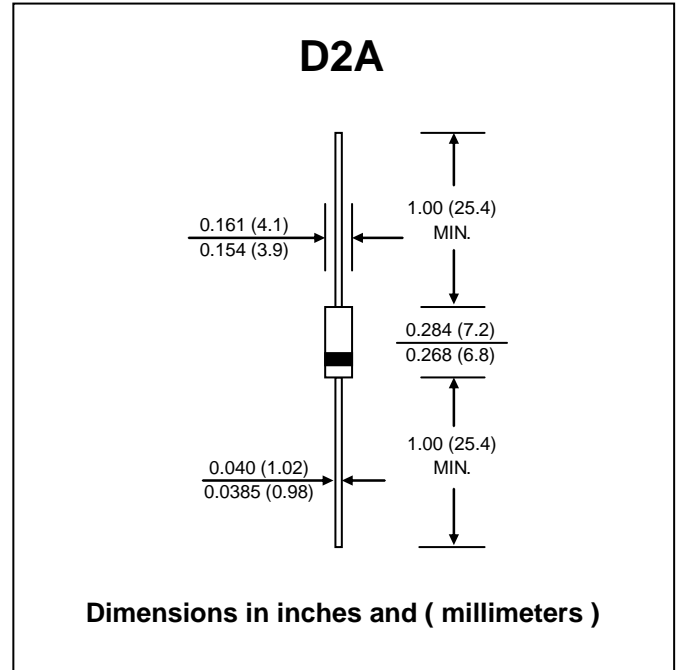
### FEATURES :

- \* High current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* **Pb Free / RoHS Compliant**

### MECHANICAL DATA :

- \* Case : D2A 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 : 0.645 gram

## ULTRAFAST RECTIFIER DIODE



### 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	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	V
Maximum RMS Voltage	$V_{RMS}$	140	V
Maximum DC Blocking Voltage	$V_{DC}$	200	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	2.0	A
Peak Forward Surge Current, 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	80	A
Maximum Peak Forward Voltage at $I_F = 2.0\text{ A}$	$V_F$	1.3	V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$	$I_R$	5.0	$\mu\text{A}$
at Rated DC Blocking Voltage $T_a = 150\text{ }^\circ\text{C}$	$I_{R(H)}$	100	$\mu\text{A}$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	80	ns
Typical Junction Capacitance ( Note 2 )	$C_J$	35	pf
Typical Thermal Resistance ( Note 3 )	$R_{\theta JA}$	22	$^\circ\text{C/W}$
Junction Temperature Range	$T_J$	- 65 to + 175	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 175	$^\circ\text{C}$

### 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 at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

## RATING AND CHARACTERISTIC CURVES ( RGP20DT )

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

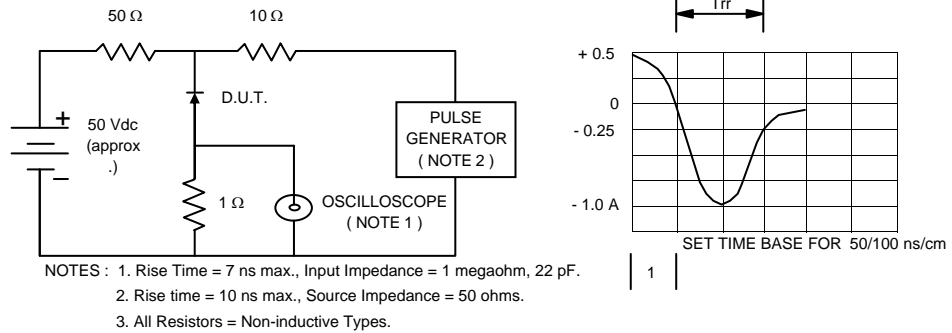


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

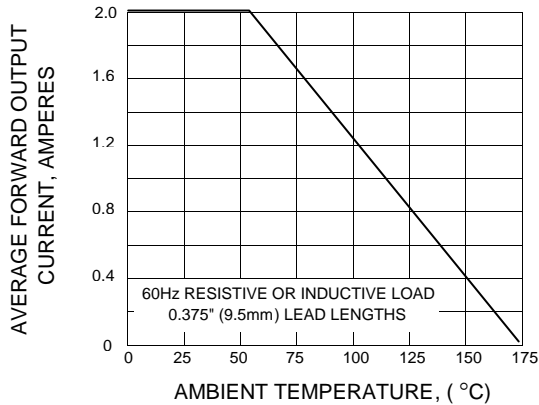


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

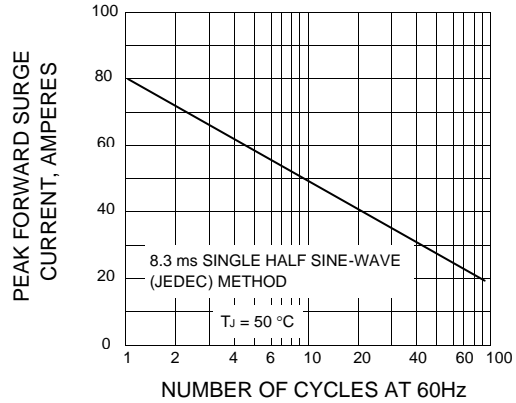


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

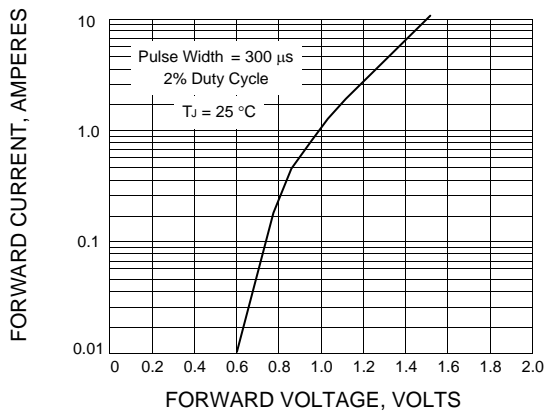


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

