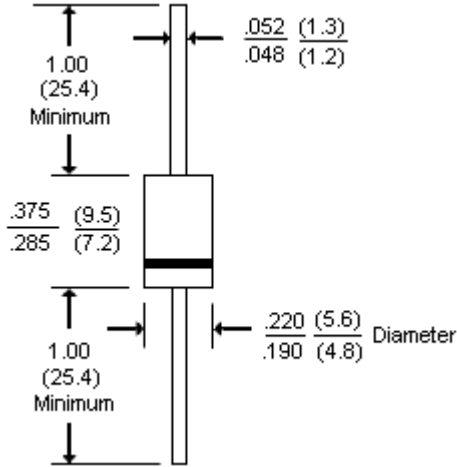


PS3010R

3A Fast Recovery Axial Rectifier



DO-201AD



Dimensions : Inches (Millimetres)

Features:

- High surge current capability.
- 3 Ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/228.
- Fast switching for high efficiency.

Mechanical Data:

- Case : Moulded plastic.
- Terminals : Axial leads, solderable per MIL-STD-202, Method 208.
- Polarity : Band denotes cathode.
- Mounting position : Any.

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

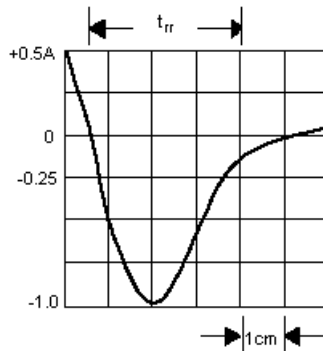
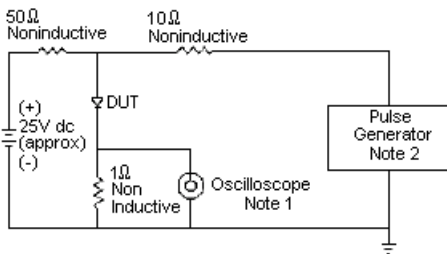
Parameters	PS3010R	Units
Maximum recurrent peak reverse voltage	1000	V
Maximum RMS voltage	700	
Maximum DC blocking voltage	1000	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	3.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	200	
Maximum forward voltage at 3.0A	1.3	V
Maximum reverse current $T_J = 25^\circ\text{C}$ at rated DC blocking voltage $T_J = 100^\circ\text{C}$	5.0 500	μA
Maximum reverse recovery time (Note 1)	500	ns

Parameters	PS3010R	Units
Typical junction capacitance (Note 2) C_J	60	pF
Typical thermal resistance (Note 3) $R_{\theta JA}$	22	$^{\circ}\text{C}/\text{W}$
Operating and Storage temperature range	-55 to +150	$^{\circ}\text{C}$

Notes:

- Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.
- Measured at 1MHz and applied reverse voltage of 4.0V dc.
- Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length with both leads equally heatsink.

Rating and Characteristics Curves



- Note:
- Rise Time = 7nS maximum
Input Impedance = 1M Ω , 22pF
 - Rise Time = 10nS maximum
Source Impedance = 50 Ω

Set Time
Base For
50nS/cm

Figure 1 - Reverse Recovery Time Characteristics and Test Circuit Diagram

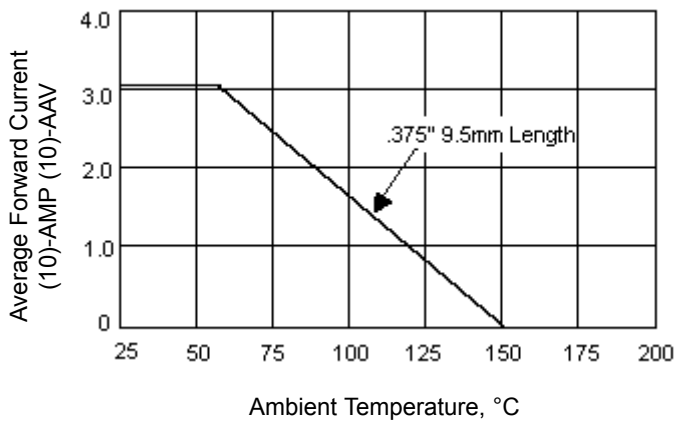


Figure 2 - Forward Current Derating Curve

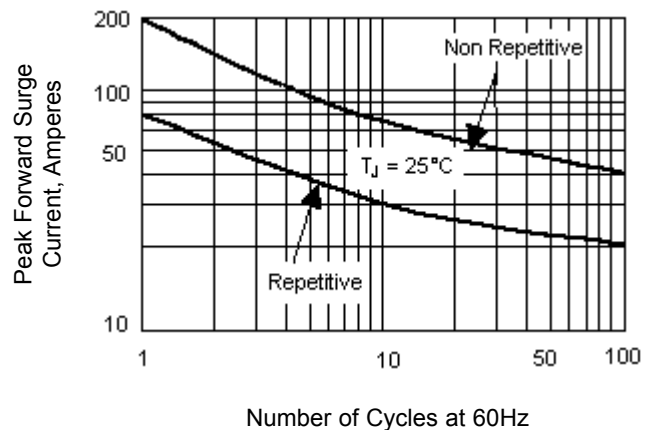


Figure 3 - Peak Forward Surge Current

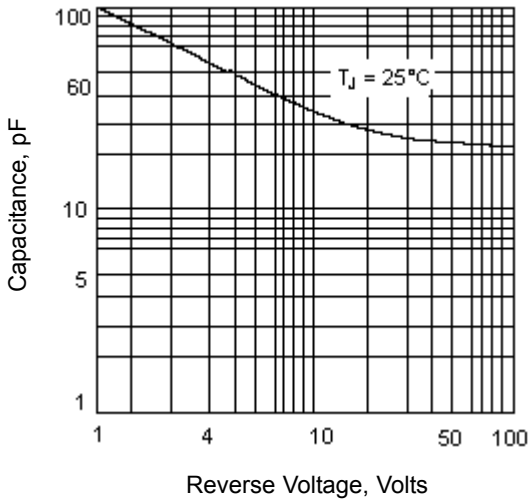


Figure 4 - Typical Junction Capacitance

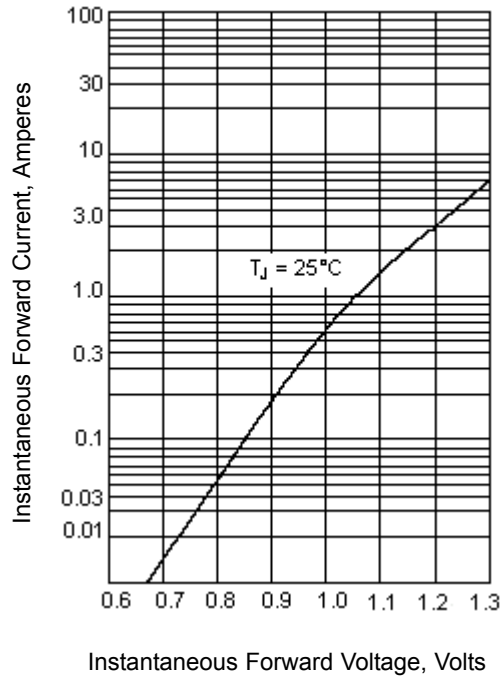


Figure 5 - Typical Instantaneous Forward Characteristics

Specifications

V_{rrm} (V)	I_f (av) (A)	I_{fsm} (A)	t_{rr} maximum (ns)	V_f (V) at $I_F = 3A$	Length	Diameter	Part Number
1000	3	500	200	1.3	9.5	5.6	PS3010R

Dimensions : Millimetres

PS3010R

3A Fast Recovery Axial Rectifier



Notes:

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