

# Fast Recovery Axial Rectifier



## Features:

- High current capability
- 1A Operation at  $T_A = 55^\circ\text{C}$  with no thermal runaway
- Fast switching for high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage

## Mechanical Data:

Case	: Moulded plastic
Terminals	: Plated axial leads, solderable per MIL-STD-202, Method 208
Polarity	: Colour band denotes cathode
Mounting position	: Any
Weight	: 0.012oz, 0.3g

## Maximum Ratings and Electrical Characteristics:

Rating at  $25^\circ\text{C}$  ambient temperature unless otherwise specified

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

For capacitive load, derate current by 20%

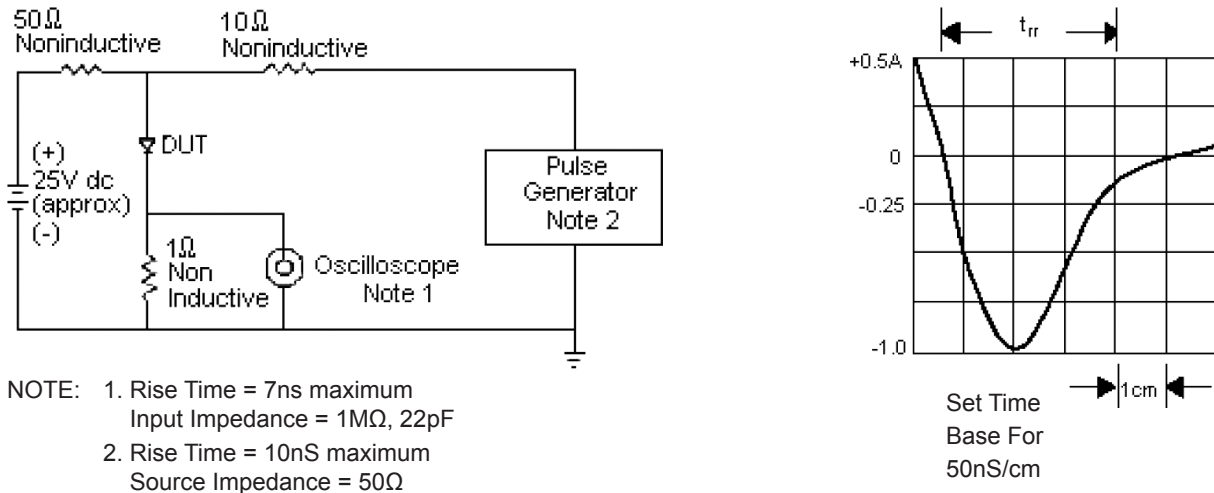
Description	Rating	Units
Maximum recurrent peak reverse voltage	1,000	V
Maximum RMS voltage	700	
Maximum DC blocking voltage	1,000	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	1	A
Peak forward surge current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	30	
Maximum forward voltage at 1A DC	1.3	1.7
Maximum reverse current $T_J = 25^\circ\text{C}$ at rated DC blocking voltage $T_J = 100^\circ\text{C}$	5 500	$\mu\text{A}$
Typical junction capacitance (Note 1) $C_J$	12	pF
Typical thermal resistance (Note 3) $R_{\theta JA}$	41	$^\circ\text{C/W}$
Maximum reverse recovery time (Note 2)	500	ns
Operating and Storage temperature range $T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

## Notes:

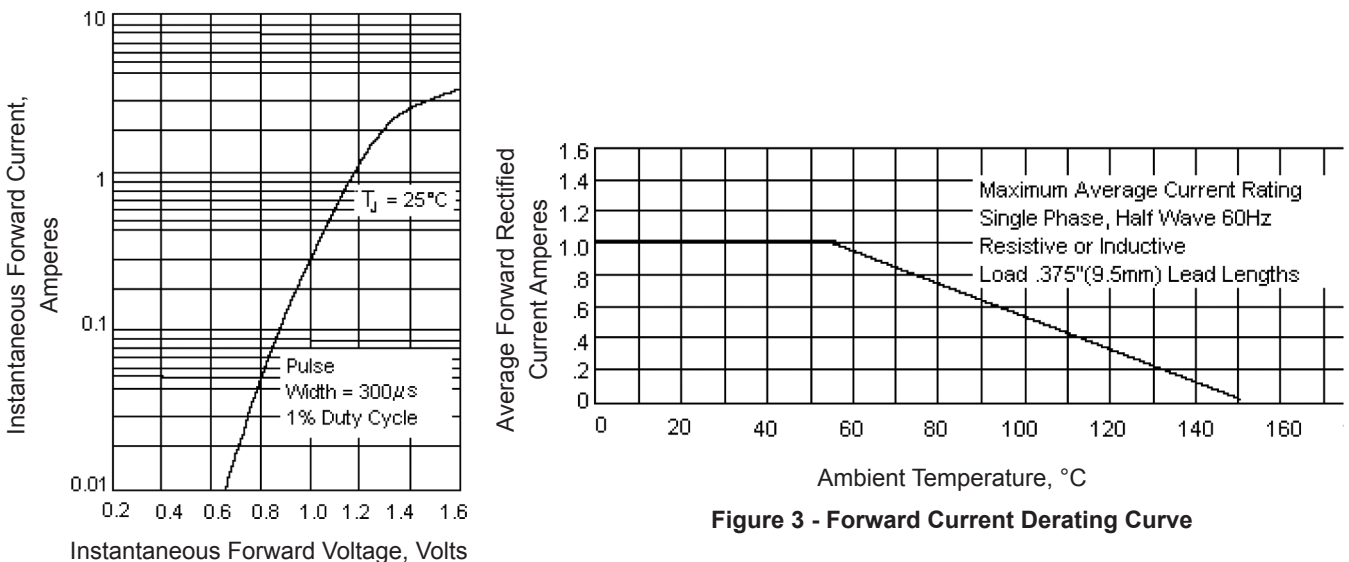
1. Measured at 1MHz and applied reverse voltage of 4V DC
2. Reverse recovery test conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = 0.25\text{A}$
3. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) PCB mounted

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## Rating and Characteristics Curves



**Figure 1 - Reverse Recovery Time Characteristics and Test Circuit Diagram**



**Figure 2 - Typical Instantaneous Forward Characteristics**

**Figure 3 - Forward Current Derating Curve**

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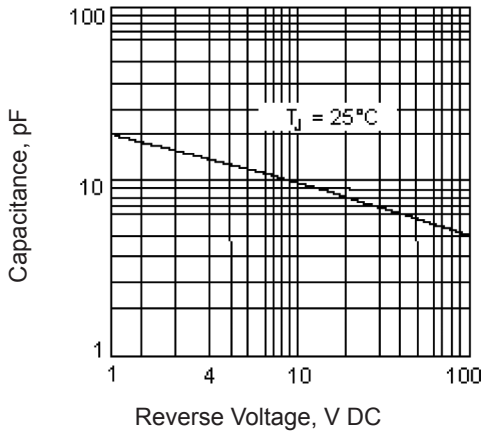


Figure 4 - Typical Junction Capacitance

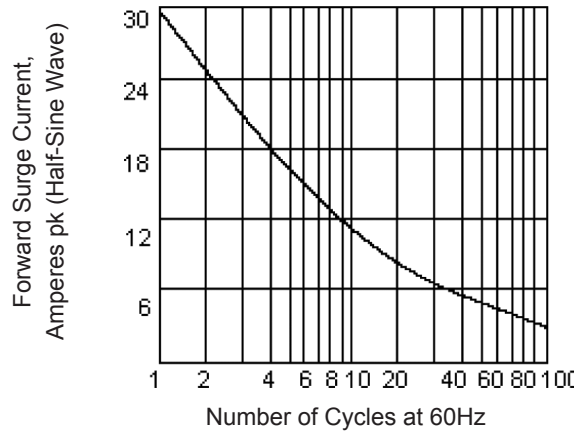
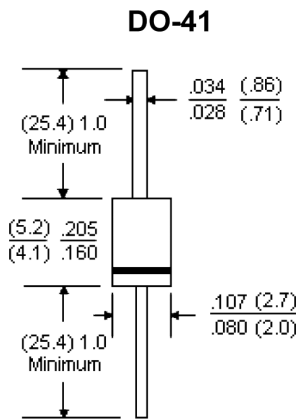


Figure 5 - Peak Forward Surge Current



Dimensions: Inches (Millimetres)

## Part Number Table

Description	Part Number
Diode, Fast, 1A, 1000V	PS1010R

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