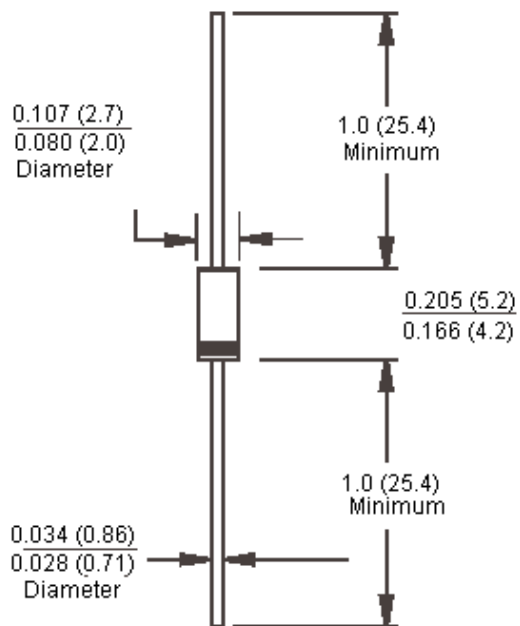




Features:

- High efficiency, low V_F .
- High current capability.
- High reliability.
- High surge current capability.
- Low power loss.

DO-41



Dimensions : Inches (Millimetres)

Mechanical Data:

Cases	: Moulded plastic.
Lead	: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed.
Polarity	: Colour band denotes cathode end.
High temperature soldering guaranteed	: 260°C/10 seconds/0.375 inch, (9.5mm) lead lengths at 5lbs., (2.3kg) tension.
Weight	: 0.34 grams.

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%.

Type Number	Symbol	FR102	FR103	FR105	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	100	200	600	V
Maximum RMS Voltage	V _{RMS}	70	140	420	
Maximum DC Blocking Voltage	V _{DC}	100	200	600	
Maximum Average Forward Rectified Current 0.375 inch (9.5mm) Lead Length at T _A = 55°C	I _(AV)	1.0			A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	30			
Maximum Instantaneous Forward Voltage at 1.0A	V _F	1.2			V
Maximum DC Reverse Current at T _A = 25°C at Rated DC Blocking Voltage at T _A = 125°C	I _R	5.0 150			μA μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	150		250	nS
Typical Junction Capacitance (Note 2)	C _j	10			pF
Typical Thermal Resistance	R _{θJA} R _{θJC}	65 8			°C/W
Operating Temperature Range T _J	T _J	-65 to +150			°C
Storage Temperature Range T _{STG}	T _{STG}				

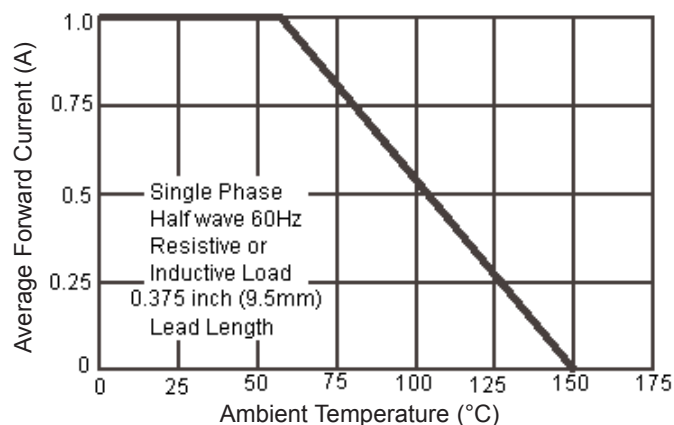
Note: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$.

2. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts DC.

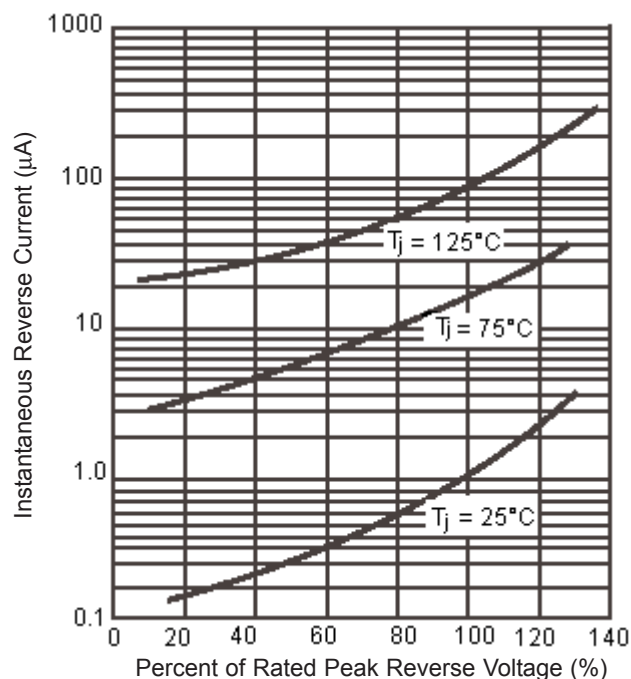
3. Mount on Cu-Pad Size 5mm x 5mm on PCB.

Ratings and Characteristic Curves (FR102, 103, 105)

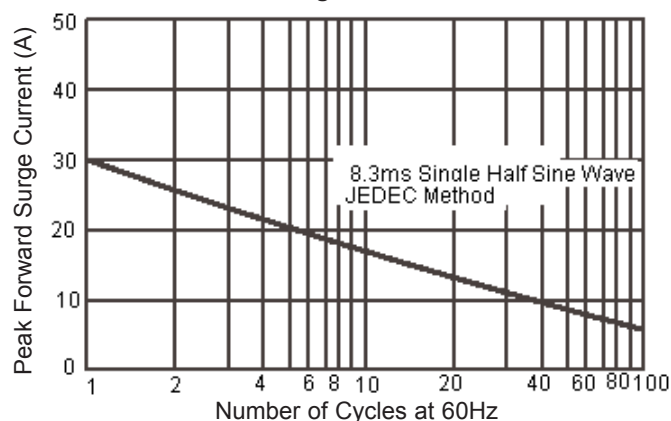
Maximum Forward Current Derating Curve



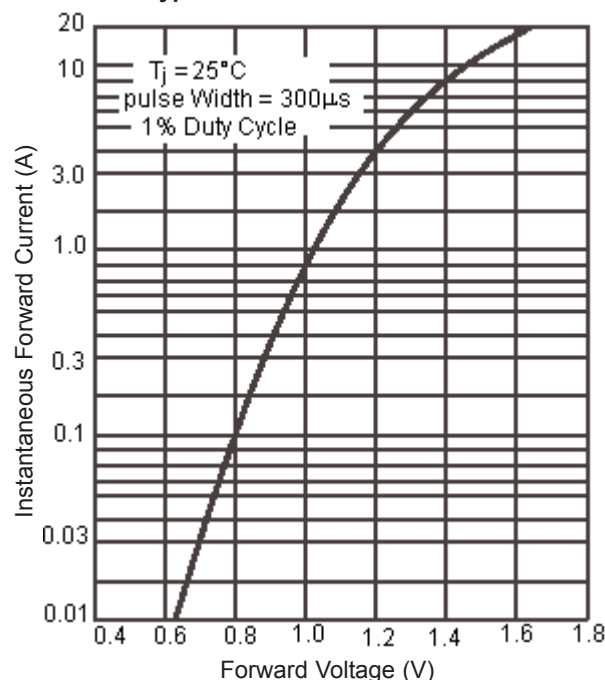
Typical Reverse Characteristics Per Leg



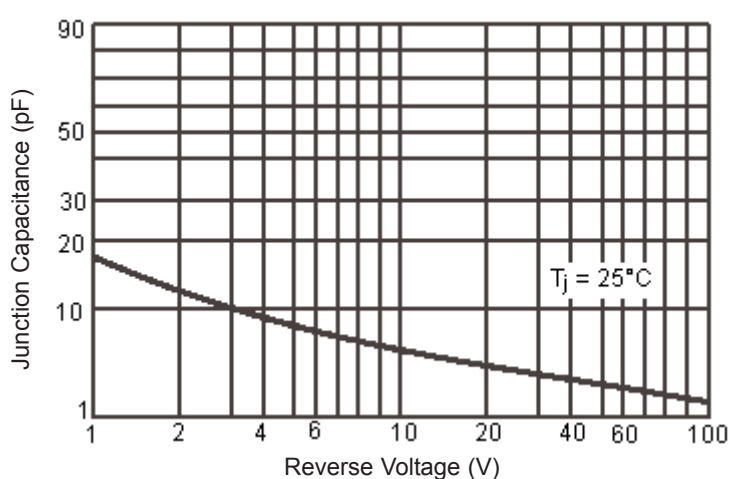
Maximum Non-Repetitive Forward Surge Current



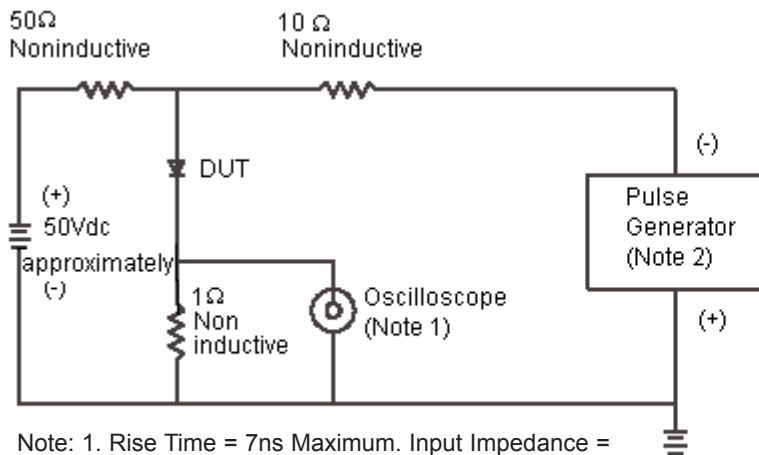
Typical Forward Characteristics



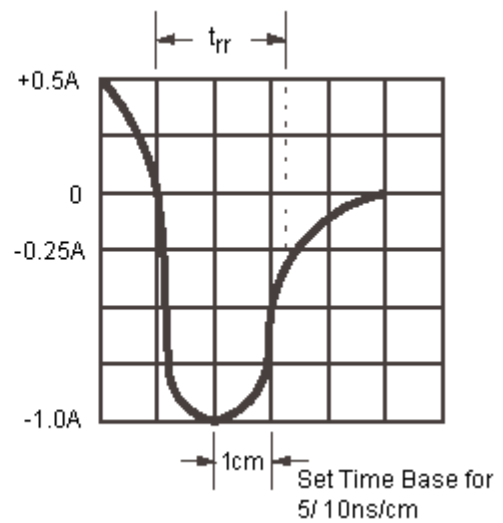
Typical Junction Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram



Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1 Megohm 22pf
2. Rise Time = 10ns Maximum Source Impedance = 50 ohms



Part Number Table

Description	Part Number
Diode, Fast, 1A, 100V	FR102
Diode, Fast, 1A, 200V	FR103
Diode, Fast, 1A, 600V	FR105

Notes:

International Sales Offices:

	AUSTRALIA – Farnell Tel No: ++61 1300 361 005 Fax No: ++61 1300 361 225		FINLAND – Farnell Tel No: ++ 358 9 560 7780 Fax No: ++ 358 9 345 5411		ITALY – Farnell Tel No: ++ 39 02 93 995 200 Fax No: ++ 39 02 93 995 300		SPAIN – Farnell Tel No: 901 20 20 80 Fax No: 901 20 20 90
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