

Standard Diode



RoHS
Compliant



Features:

- High efficiency, Low VF
- High current capability
- High reliability
- High surge current capability
- Low power loss

Mechanical Data

Case	: Moulded plastic
Epoxy	: UL 94V-0 rate flame retardant
Polarity	: Colour band denotes cathode
High temperature soldering guaranteed	: 260°C / 10s / 0.375 Inches, (9.5mm) lead lengths at 5 lbs, (2.3kg) tension
Weight	: 0.35 g

Max. 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%

Type Number	Symbol	Values	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	1,000	V
Maximum RMS Voltage	V _{RMS}	700	
Maximum DC Blocking Voltage	V _{DC}	1,000	
Maximum Average Forward Rectified Current 0.375 Inches (9.5mm) Lead Length at T _A = 75°C	I _{F(AV)}	1	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I _{FSM}	30	
Rating for Fusing (t < 8.3 ms)	I ² T	3.7	A ² S
Maximum Instantaneous Forward Voltage at 1A (Note 1)	V _F	1	V
Maximum Reverse Current at Rated V _R T _A = 25°C T _A = 125°C	I _R	5 50	µA
Maximum Full load Reverse Current, Full cycle Average 0.375 Inches (9.5mm) Lead Length at T _A = 75°C	I _{R(AV)}	30	µA
Typical Junction Capacitance (Note 2)	C _J	10	pF
Typical Thermal Resistance	R _{θJA} R _{θJC} R _{θJL}	65 6 15	°C/W
Operating Temperature Range	T _J	-65 to +150	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

Notes : 1. Pulse Test with PW = 300 usec, 1% Duty Cycle
2. Measured at 1 MHz and Applied Reverse Voltage of 4 V DC



Rating and Characteristic Curves

Figure 1. Maximum Forward Current Derating Curve

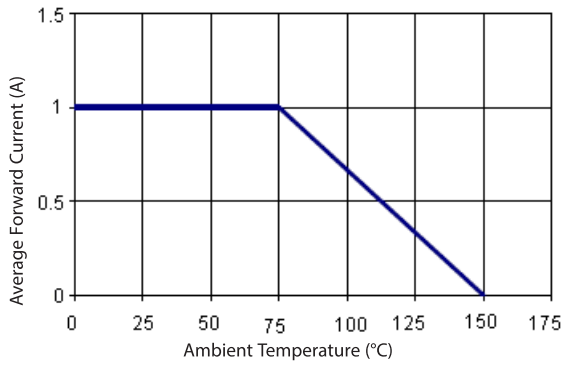
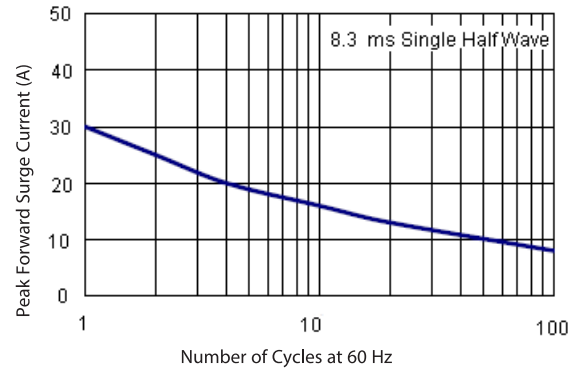
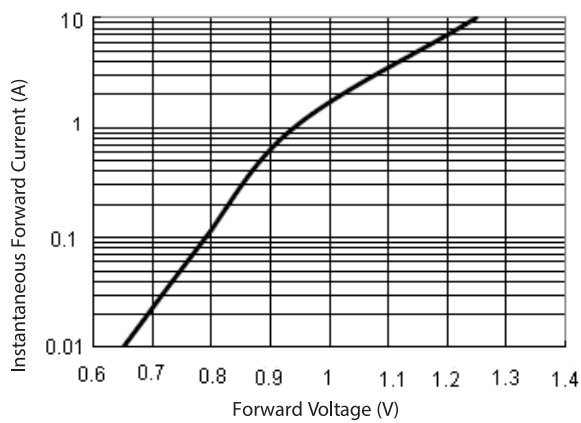


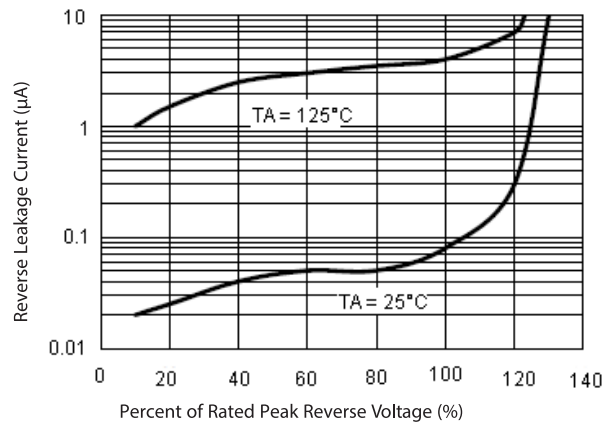
Figure 2. Maximum Non-Repetitive Forward Surge Current



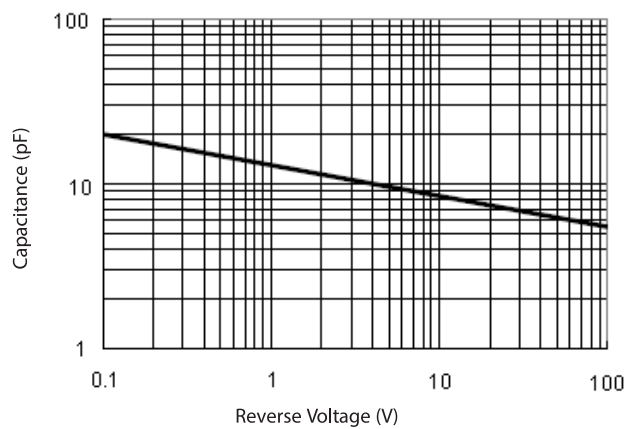
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



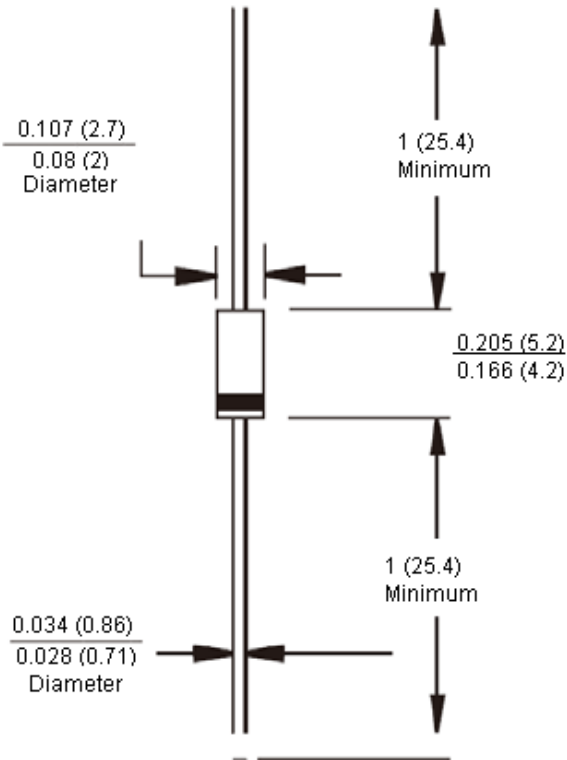
Standard Diode



Dimensions:

1 Amperes Silicon Rectifiers

DO - 41



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Standard Power Diode, 1A, Single, 2.5V, 30A	1N4007+

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