



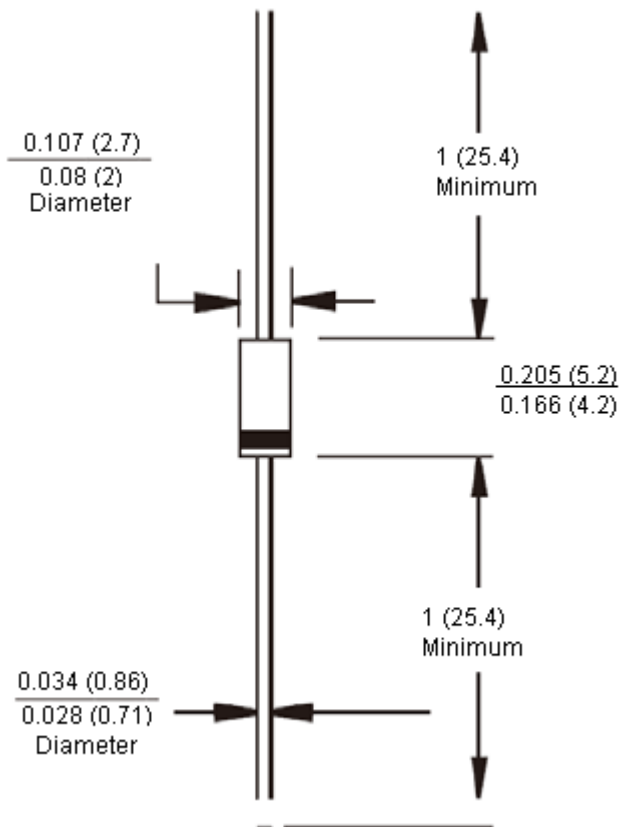
Features:

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



1 Amperes Silicon Rectifiers

DO - 41



Dimensions : Inches (Millimetres)

Mechanical Data

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

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%

Type Number	Symbol	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1,000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1,000	V
Maximum Average Forward Rectified Current 0.375 Inches (9.5 mm) Lead Length at $T_A = 75^\circ\text{C}$	$I_F (AV)$	1							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	30							A
Rating for Fusing ($t < 8.3$ ms)	I^2T	3.7							A ² S
Maximum Instantaneous Forward Voltage (Note 1) at 1 A	V_F	1							V
Maximum Reverse Current at Rated VR $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	5 50							μA
Maximum Full load Reverse Current, Full cycle Average 0.375 Inches (9.5 mm) Lead Length at $T_A = 75^\circ\text{C}$	$I_R (AV)$	30							μA
Typical Junction Capacitance (Note 2)	C_j	10							pF
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	65 6 15							$^\circ\text{C/W}$
Operating Temperature Range	T_J	-65 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150							$^\circ\text{C}$

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

Rating and Characteristic Curves

Figure 1. Maximum Forward Current Derating Curve

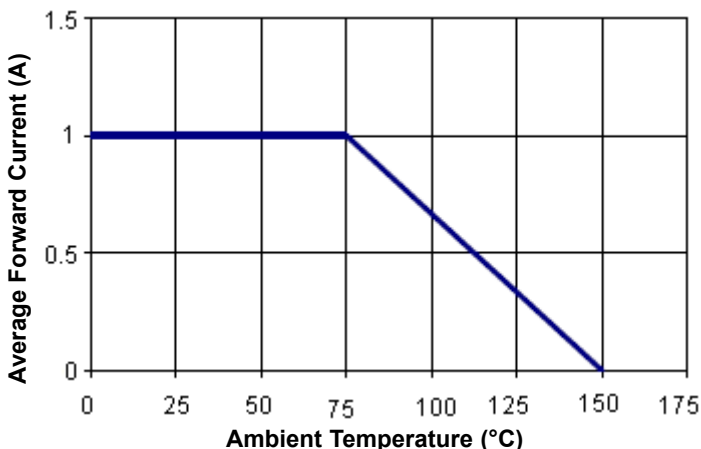
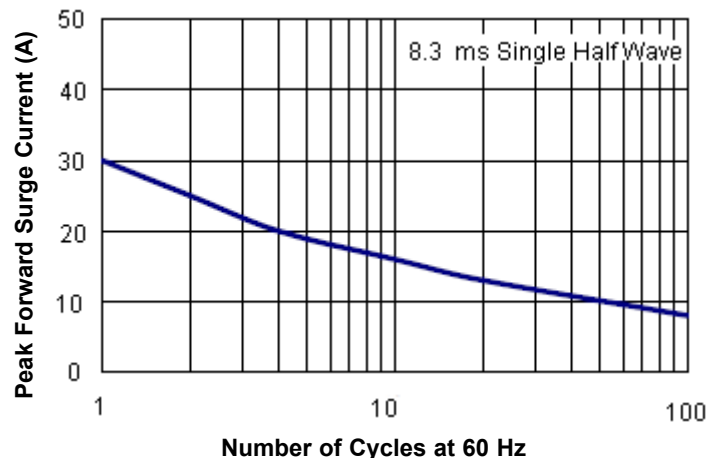


Figure 2. Maximum Non-Repetitive Forward Surge Current

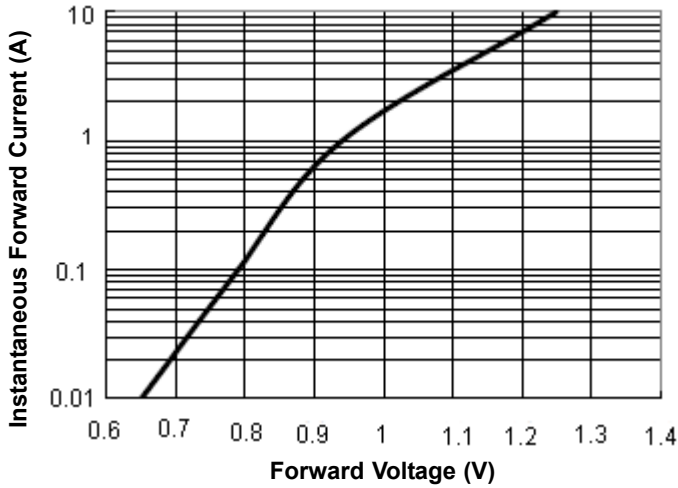


Standard Diodes

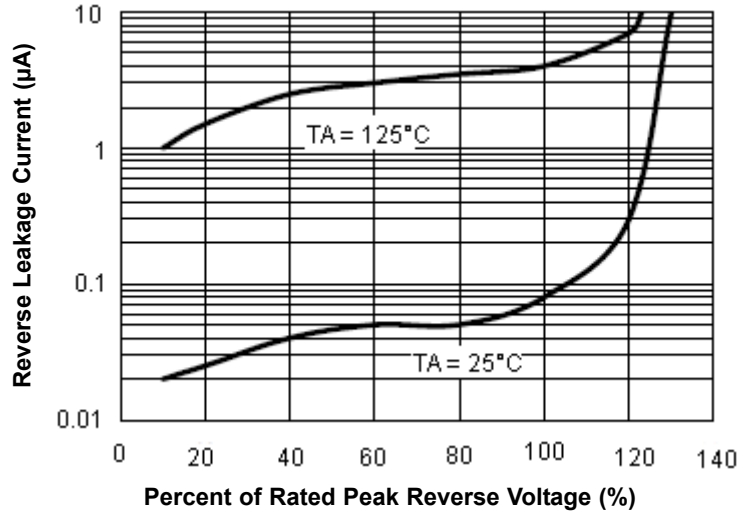


Rating and Characteristic Curves

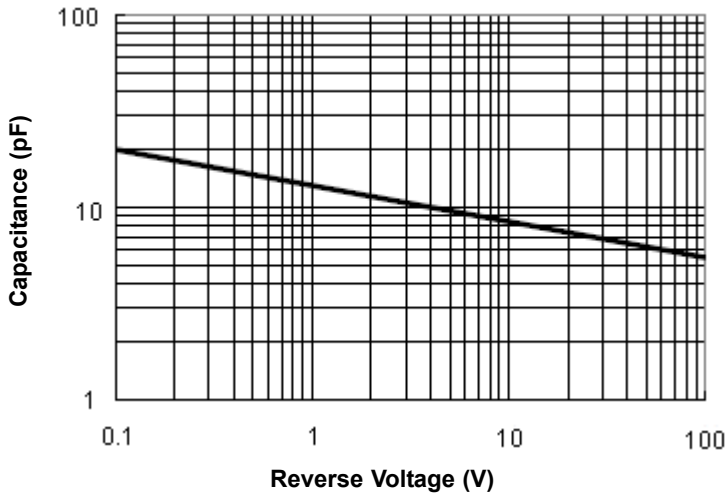
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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