Plastic Silicon Rectifiers

RoHS Compliant

Features

- Low cost
- Diffused junction
- Low leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Freon, Alcohol, Isopropanol and similar solvents
- The plastic material carries U/L recognition 94V-0

Mechanical Data

Case : JEDEC DO-41
Case Material : Molded Plastic
Terminals : Axial lead, solderable per MIL- STD-202, Method 208
Polarity : Colour band denotes cathode
Weight : 0.012 ounces, 0.34 grams
Mounting position : Any

Max. Ratings and Electrical Characteristics @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Unit
Max. Recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1,000	V
Max. RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Max. DC blocking voltage	V_{DC}	50	100	200	400	600	800	1,000	V
Max. average forward rectified current 9.5mm lead lengths, @ T_A = 75°C	$I_{F(AV)}$	1							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ T_J = 125°C	I_{FSM}	30							A
Max. instantaneous forward voltage @ 1.0 A	V_F	1							V
Max. reverse current @ T_A = 25°C at rated DC blocking voltage @ T_A = 100°C	I_R	5 50							μA
Typical junction capacitance (Note1)	C_J	15							pF
Typical junction capacitance (Note2)	$R_{\theta JA}$	50							°C/W
Operating junction temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Note:
1. Measured at 1MHz and applied reverse voltage of 4V DC.
2. Thermal resistance from junction to ambient.

Ratings And Characteristic Curves

Fig.1 -- Typical Forward Characteristic

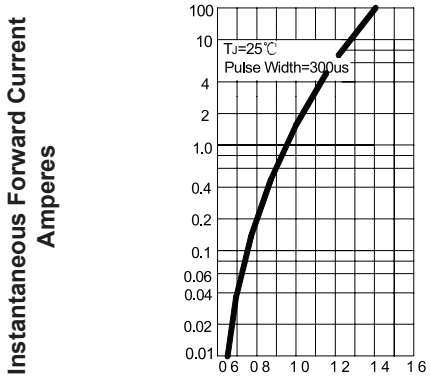


Fig.2 -- Typical Junction Capacitance

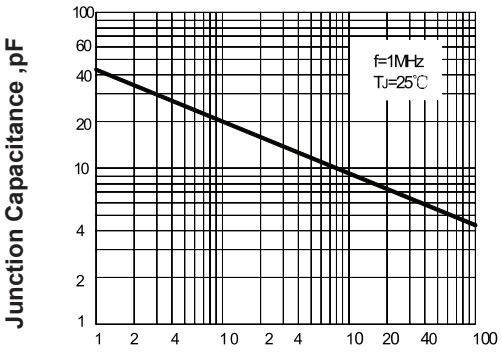


Fig.3 -- Peak Forward Surge Current

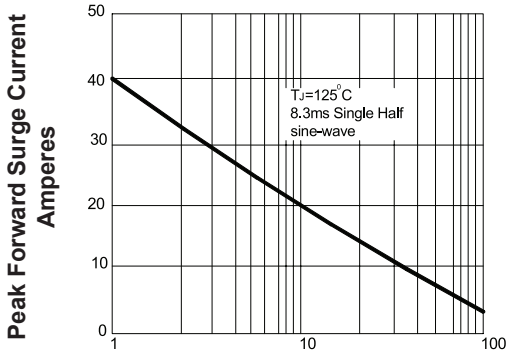
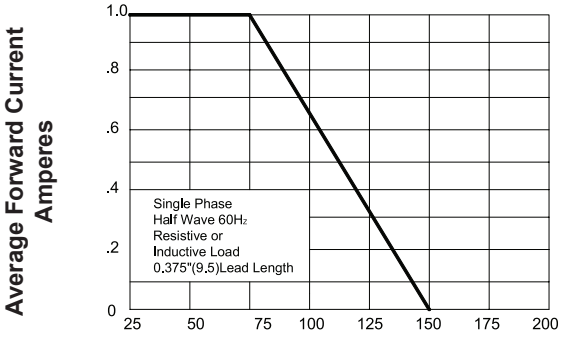


Fig.4 -- Forward Derating Curve



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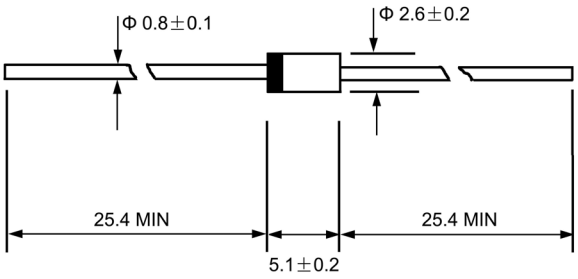

Dimensions : Millimetres

Part Number Table

Description	Part Number
Plastic Silicon Rectifiers, 50V	1N4001
Plastic Silicon Rectifiers, 100V	1N4002
Plastic Silicon Rectifiers, 200V	1N4003
Plastic Silicon Rectifiers, 400V	1N4004
Plastic Silicon Rectifiers, 600V	1N4005
Plastic Silicon Rectifiers, 800V	1N4006
Plastic Silicon Rectifiers, 1000V	1N4007