

Plastic Silicon Rectifiers

Reverse Voltage - 50 to 1000Volts
Forward Current - 1.0 Amperes

Features

- Low cost
- Low reverse leakage current
- Low forward voltage drop
- High surge capacity
- Meet UL flammability classification 94V-0

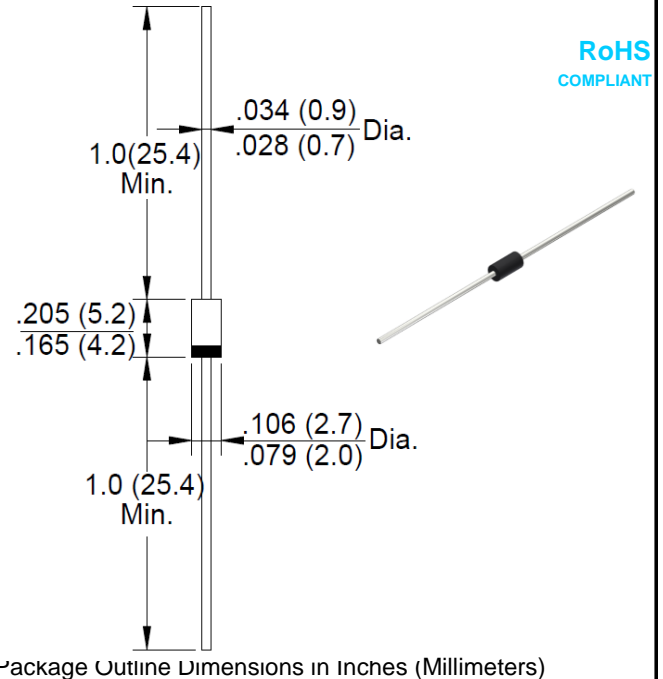
Mechanical Data

- Case: JEDEC DO-41 molded plasti
- Polarity: Color band denotes cathode
- Mounting position: Any

Applications

- For use in low voltage, high frequency inverters, polarity protection applications

DO-41



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%.

Characteristics	Symbol	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	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	1000	V
Maximum Average Forward Rectified Current @T _A =75 °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							A
I ² t Rating for Fusing (t<8.3mS)	I ² t	3.7							A ² s
Peak Forward Voltage at 1.0A DC (Note1)	V _F	1.0							V
Maximum DC Reverse Current @T _J =25°C	I _R	5.0							uA
at Rated DC Blocking Voltage @T _J =100°C		50							
Typical Junction Capacitance (Note 2)	C _J	15							pF
Typical Thermal Resistance Junction to Case	R _{θJC}	26							°C/W
Operating Junction Temperature Range	T _J	-55 to+150							°C
Storage Temperature Range	T _{STG}	-55 to+150							°C

- Notes: 1. 300uS pulse width, 2%duty cycle.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. The typical data above is for reference only .

Fig. 1 - Forward Current Derating Curve

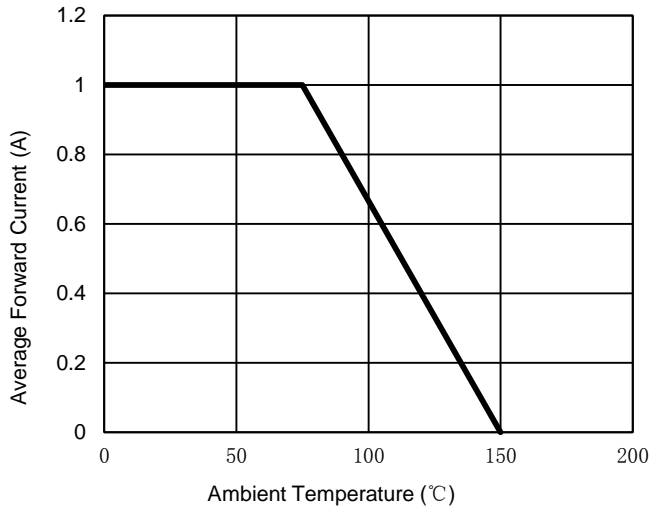


Fig. 2 - Maximum Non-Repetitive Surge Current

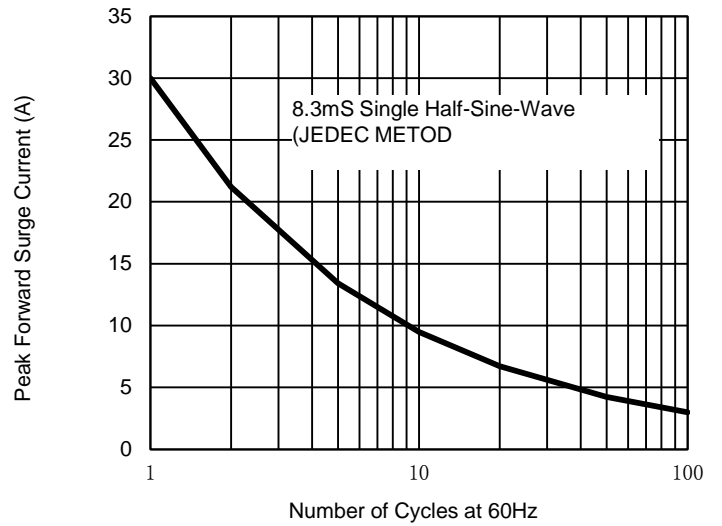


Fig. 3 - Typical Reverse Characteristics

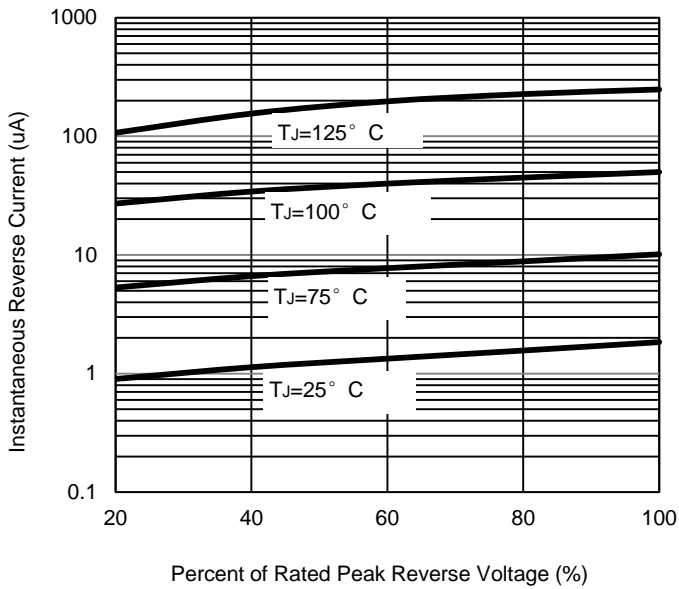


Fig. 4 - Typical Forward Characteristics

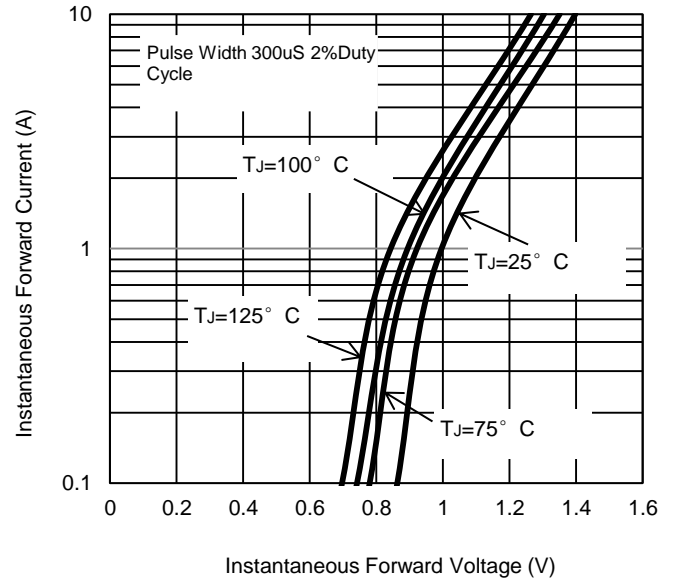
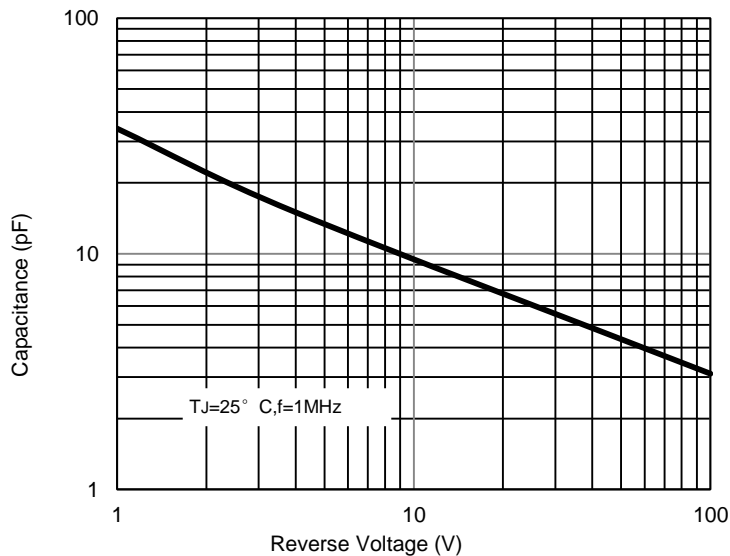


Fig. 5 - Typical Junction Capacitance





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