

GENERAL PURPOSE PLASTIC RECTIFIER

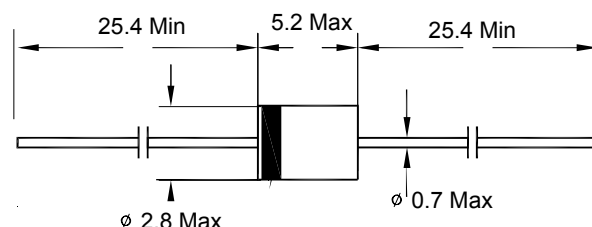
FEATURES

Low reverse leakage
 High current capability
 High reliability
 High surge current capability
 Exceeds environmental standards of MIL-S-19500/228
 In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

Case: Transfer molded plastic
 Epoxy: UL94V-O rate flame retardant
 Polarity: Color band denotes cathode end
 Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
 Mounting position: Any
 Weight: 0.012 ounce, 0.33 grams

1N4001---1N4007



DO-41 Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified, Single Phase, half wave, 60Hz, resistive or inductive load, For capacitive load derate current by 20%

		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 0.375”(9.5mm) lead length at T _A = 25 °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
Maximum Instantaneous Forward Voltage @ 1.0A		V _F	1.0							V
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	T _A = 25 °C	I _R	5.0							μA
	T _A = 100 °C		50							
Maximum Full Load Reverse Current, full cycle average , 0.375”(9.5mm)lead length at T _L =75 °C		I _{R(AV)}	30							μA
Typical Junction Capacitance (Note 1)		C _J	14							pF
Typical Thermal Resistance (Note 2)		R _{θJA}	50							°C/W
Operating Junction Temperature Range		T _J	-55-150							°C
Storage Temperature Range		T _{STG}	-55-150							°C

1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.

2. Thermal Resistance from junction to terminal 6.0mm² copper pads to each terminal.

3. The chip size is 40mil×40mil

1N4001---1N4007 Typical Characteristics

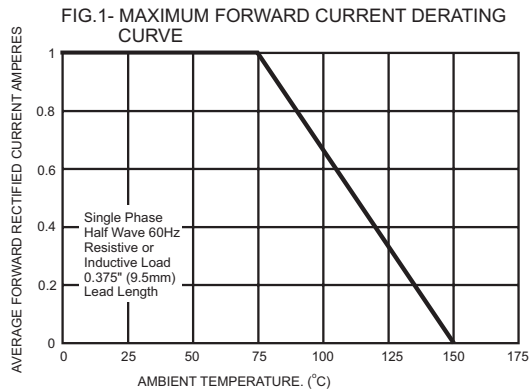


FIG.2- TYPICAL REVERSE CHARACTERISTICS

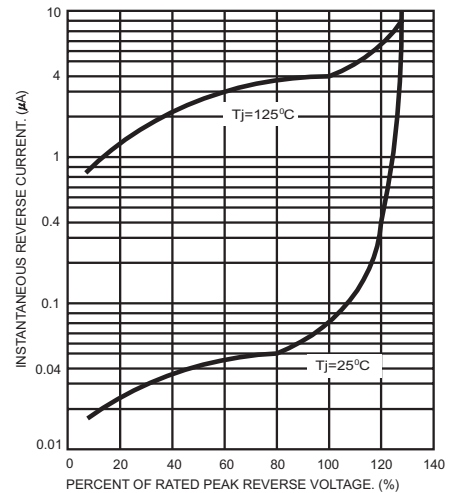


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

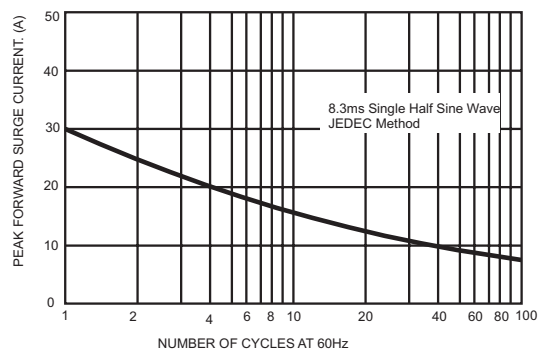


FIG.4- TYPICAL JUNCTION CAPACITANCE

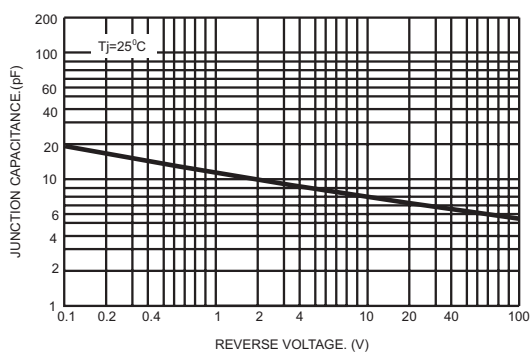


FIG.5- TYPICAL FORWARD CHARACTERISTICS

