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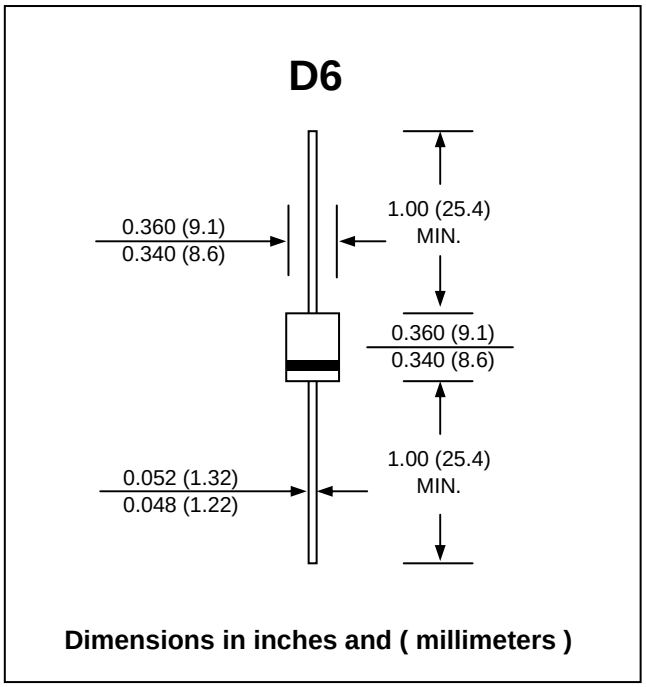
10A07E

SILICON RECTIFIER DIODE

PRV : 1000 Volts
Io : 10 Amperes



FEATURES :

* Diffused Junction
* High current capability and Low Forward Voltage Drop
* Surge Overload Rating to 400A Peak
* Low Reverse Leakage Current
* Pb / RoHS Free

MECHANICAL DATA :

* Case : molded plastic
* Epoxy : UL94V-0 rate flame retardant
* Lead : Axial lead solderable per J-STD-002,
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 2.049 grams

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%.

RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS Voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	1000	V
Average Rectified Output Current (Note 1) Ta = 50°C	I_O	10	A
Non-Repetitive Peak Forward Surge Current 8.3 ms Single half sine wave superimposed on rated load (JEDEC Method)	I_{FSM}	400	A
Maximum Forward Voltage at I_F = 10 A	V_F	1.0	V
Maximum DC Reverse Current Ta = 25 °C	I_R	10	μA
at rated DC Blocking Voltage Ta = 100 °C	$I_{R(H)}$	100	μA
Typical Junction Capacitance (Note 2)	Cj	150	pF
Typical Thermal Resistance	$R_{\theta JC}$	10	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	- 65 to + 150	°C

Notes :

(1) Leads maintained at ambient temperature at a distance of 9.5 mm from the case.

(2) Measured at 1.0 MHz and applied reverse volage of 4.0V DC.

RATING AND CHARACTERISTIC CURVES (10A07E)

FIG.1 - FORWARD CURRENT DERATING CURVE

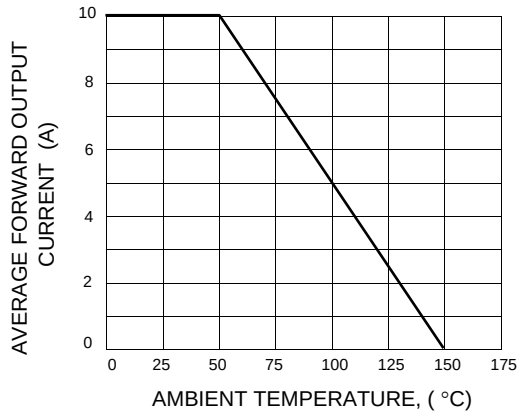


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

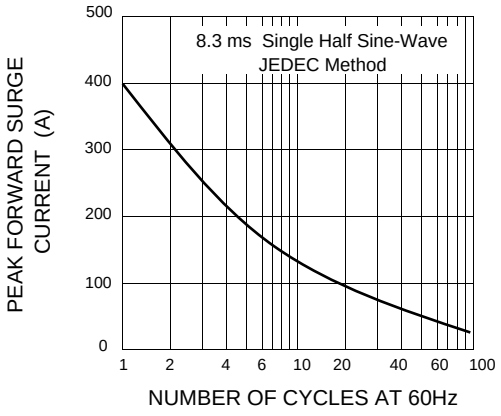


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

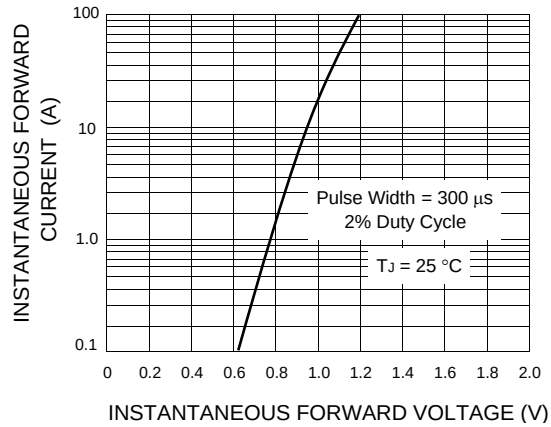


FIG.4 - TYPICAL JUNCTION CAPACITANCE