

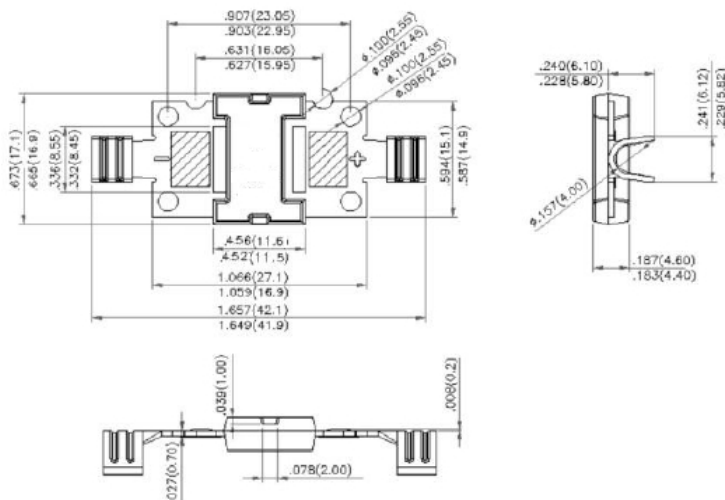
Bypass Diode Module For PV

REVERSE VOLTAGE: 50 V
FORWARD CURRENT: 50 A

FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low IR
- High surge capacity
- High temperature reverse characteristic is excellent
- For use in photovoltaic solar cell protection

MT09E



MECHANICAL DATA

Case: Molded plastic, MT09E
 Epoxy: UL 94V-O rate flame retardant
 Polarity: As marked
 Mounting position: Any
 Marking: MK5050

Dimensions in inches and (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%.

	Symbols	MK5050	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	V
Maximum RMS Voltage	V_{RMS}	35	V
Maximum DC Blocking Voltage	V_{DC}	50	V
Maximum Average Forward Rectified Current at $T_C = 125^\circ C$	$I_{(AV)}$	50.0	A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	400	A
Maximum Forward Voltage (Note 1) at $I_F = 50A, T_C = 25^\circ C$ at $I_F = 50A, T_C = 125^\circ C$	V_F	0.55 0.47	V
Maximum Reverse Current at $T_J = 25^\circ C$ at Rated DC Blocking Voltage $T_J = 100^\circ C$	I_R	0.5 500	mA
Typical Thermal Resistance	$R_{\theta JC}$	1.2	°C/W
Operating Junction Temperature Range	T_{OP}	-55 to +150	°C
Junction Temperature in DC Forward Current Without Reverse Bias. $T \leq 1$ hour (Note 3)	T_J	$\leq 200^\circ C$	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C

NOTES:

- 1- 300us Pulse Width, 2%Duty Cycle.
- 2- Thermal Resistance Junction to Case. Without Heatsink.
- 3- Meets The Requiements Of IEC 61215 ed. 2 Bypass Diode Thermal Test.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1 FORWARD CURRENT DERATING CURVE

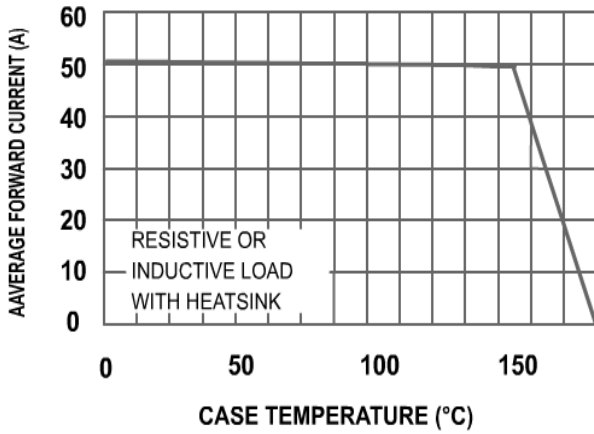


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE

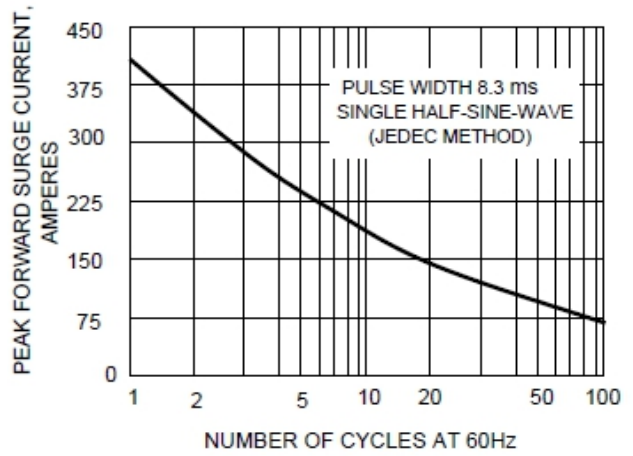


FIG.3-TYPICAL REVER CHARACTERISTICS

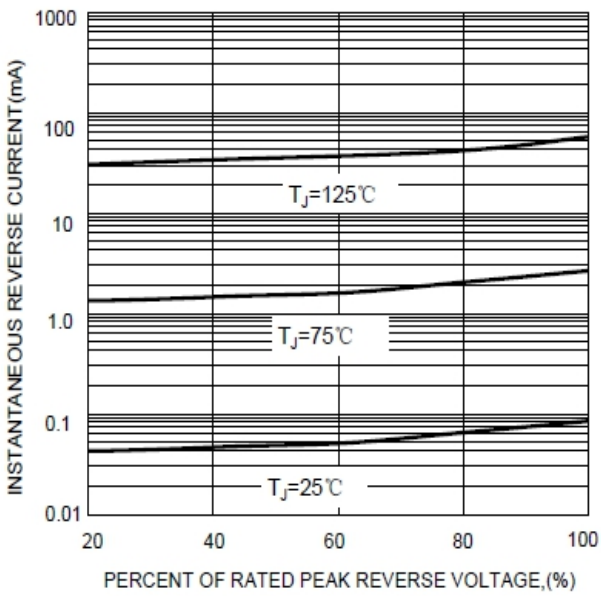


FIG.4-TYPICAL FORWARD CHARACTERISTICS

