

Bypass Diode Module For PV

REVERSE VOLTAGE: 45 VOLTS
FORWARD CURRENT: 50.0 AMPERE

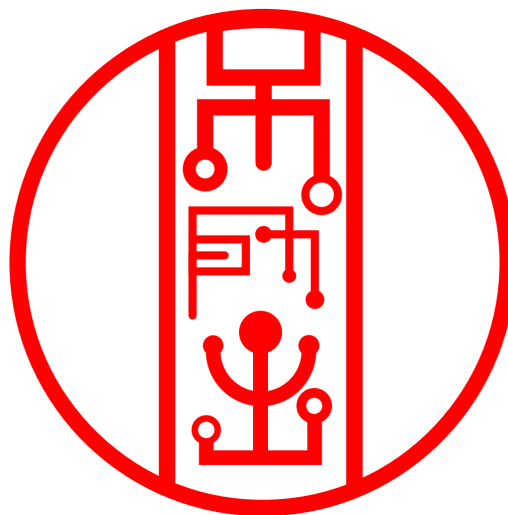
FEATURES

- 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

MECHANICAL DATA

Case: Molded plastic, MT09E
Epoxy: UL 94V-O rate flame retardant
Polarity: As marked
Mounting position: Any
Marking: 50MT045

MT09E



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	SK50MT045	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	Volts
Maximum RMS Voltage	V_{RMS}	31.5	Volts
Maximum DC Blocking Voltage	V_{DC}	45	Volts
Maximum Average Forward Rectified Current See Fig.1	$I_{(AV)}$	50.0	Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	400	Amp
Maximum Forward Voltage (Note 1)	V_F	0.55 0.47	Volts
Maximum Reverse Current at Rated DC Blocking Voltage	I_R	0.5 500	mAmp
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	$\leq 200^\circ\text{C}$	°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 Requirements Of IEC 61215 ed. 2 Bypass Diode Thermal Test.

PACKAGE AND PIN CONFIGURATION

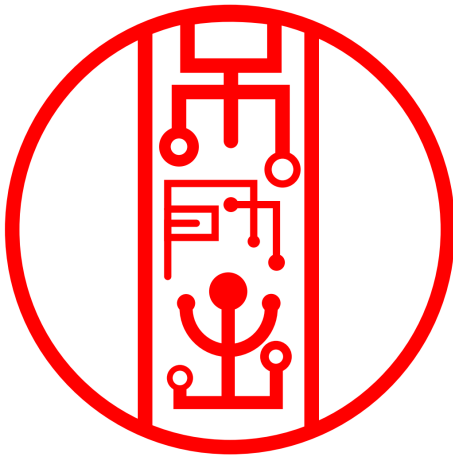


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE

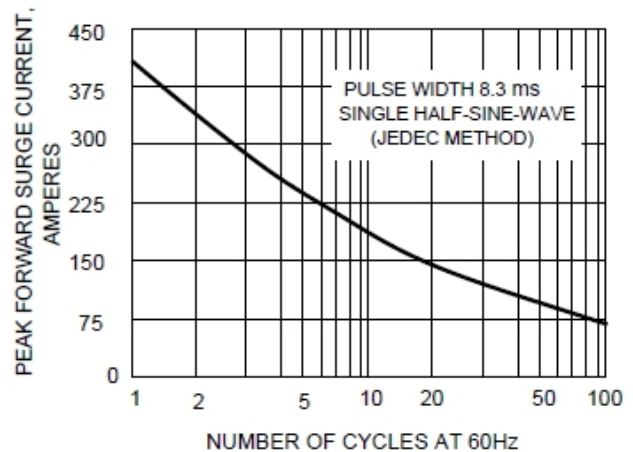


FIG.3-TYPICAL REVER CHARACTERISTICS

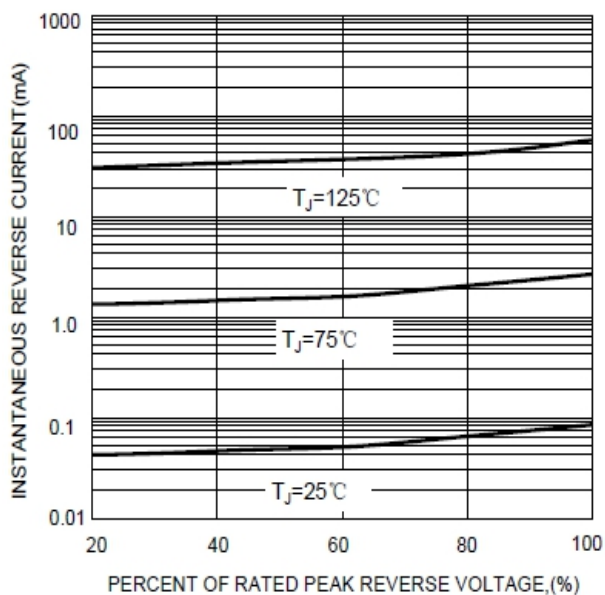


FIG.4-TYPICAL FORWARD CHARACTERISTICS

