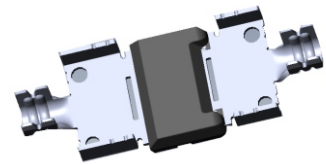
SEMICONDUCTOR

MK5045C

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 45 Volts
Forward Current - 50Amperes

PV003



FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260℃/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2011/65/Eu

MECHANICAL DATA

- Case: PV003 molded plastic body
- Terminals: Solderable per MIL-STD-202,method 208
- Polarity: As marked
- Mounting Position: Any

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25℃ ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

Parameter		Symbols	Value	Units
Maximum repetitive 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	Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	900	Amps
Maximum instantaneous forward voltage at 50.0 A		V_F	0. 53	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T_c =25℃	I_R	200	μA
	T_c =100℃		15	mA
Typical thermal resistance (Note 2)		$R_{\theta JC}$	1.0	℃/W
Storage temperature range		T_{STG}	-55 to+200	℃
Operating junction temperature range in DC forward model		T_J	-55 to+200	℃

Notes: 1.Pulse test: 300μs pulse width,1% duty cycle

2.Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC CURVES MK5045C

FIG.1-FORWARD CURRENT DERATING CURVE

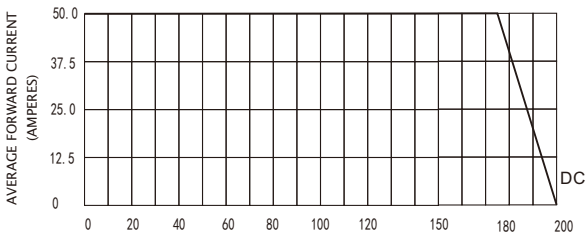


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

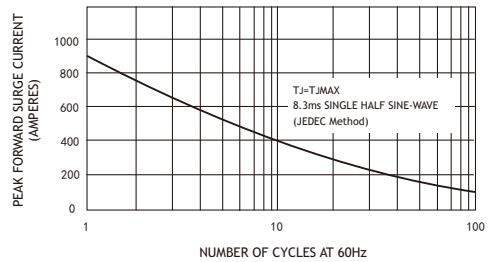


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

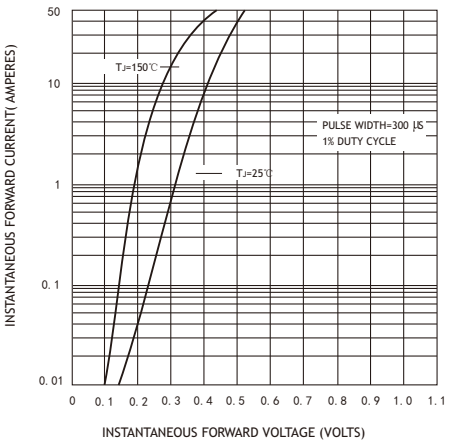


FIG.4-TYPICAL REVERSE CHARACTERISTICS

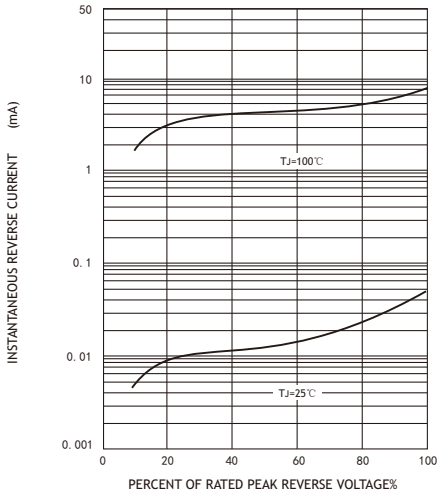
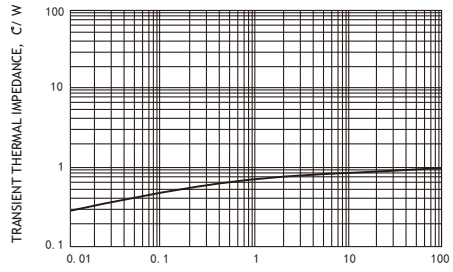
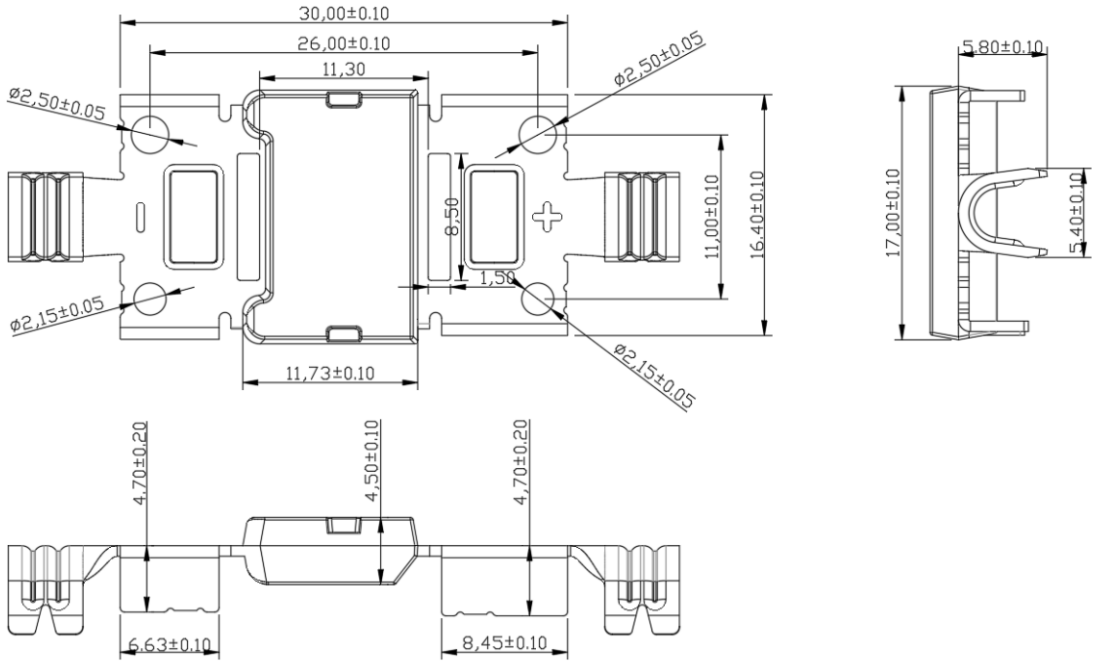


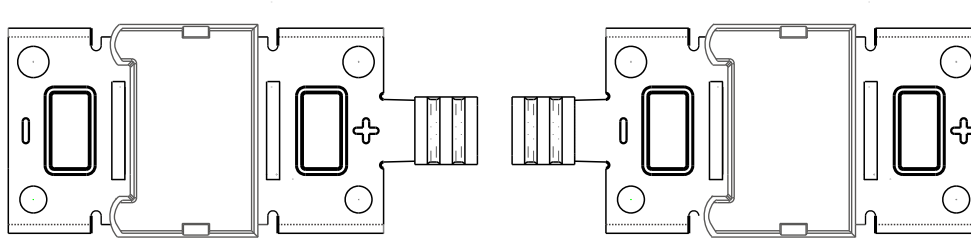
FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



PACKAGE OUTLINE DIMENSIONS



Dimensions in millimeters



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