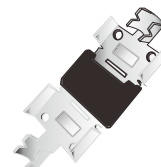


FEATURES

- 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°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2015/863/Eu

PV001



MECHANICAL DATA

- Case: PV001 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°C 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)	I_R	$T_c=25^\circ C$	200	μA
		$T_c=100^\circ C$	15	mA
Typical thermal resistance (Note 2)	$R_{\theta JC}$	1.0	$^\circ C/W$	
Storage temperature range	T_{STG}	-55 to+200	$^\circ C$	
Operating junction temperature range in DC forward model	T_J	-55 to+200	$^\circ C$	

- Notes:** 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC CURVES MK5045A

FIG.1-FORWARD CURRENT DERATING CURVE

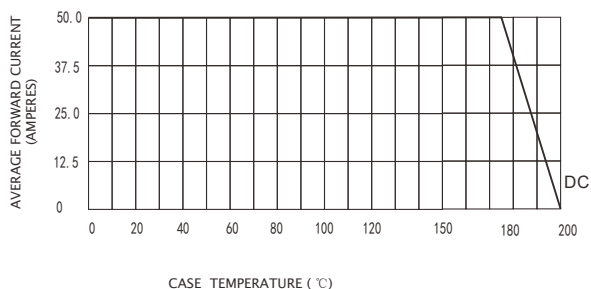


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

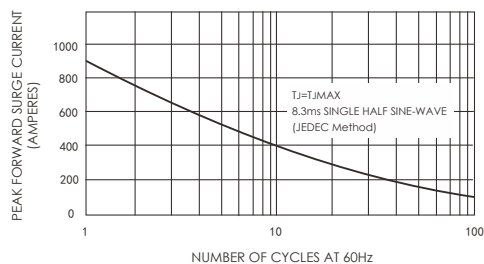


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

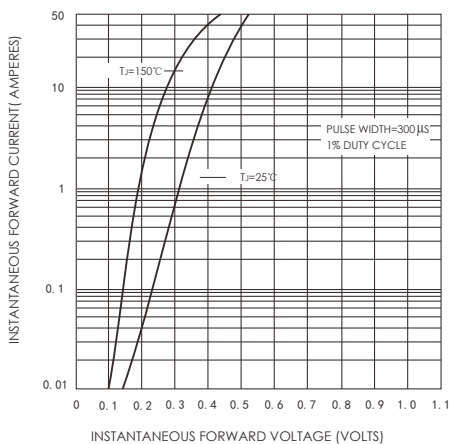


FIG.4-TYPICAL REVERSE CHARACTERISTICS

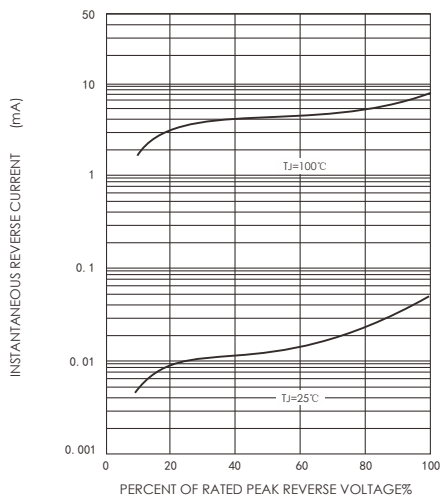
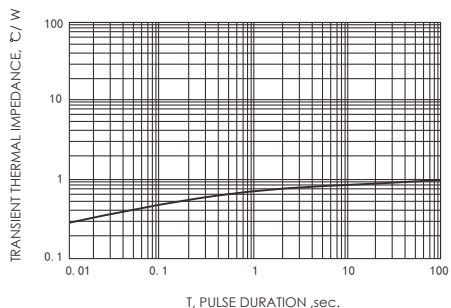


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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