

## 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

## PV002



## Mechanical Data

- Case: PV002 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	$I(AV)$	40.0	Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	400	Amps	
Maximum instantaneous forward voltage at 40.0 A	$V_F$	0.56	Volts	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$I_R$	$T_c=25^{\circ}C$	100	$\mu A$
		$T_c=100^{\circ}C$	10	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  $\mu s$  pulse width,1% duty cycle  
2.Thermal resistance from junction to case

# RATINGS AND CHARACTERISTIC CURVES MK4045B

FIG.1-FORWARD CURRENT DERATING CURVE

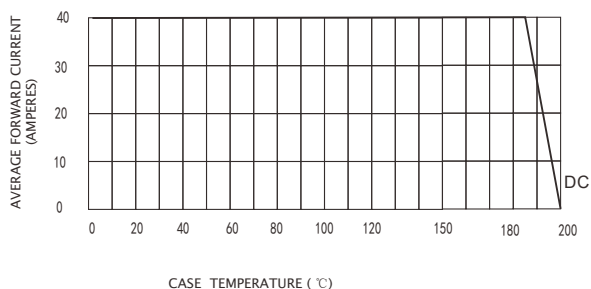


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

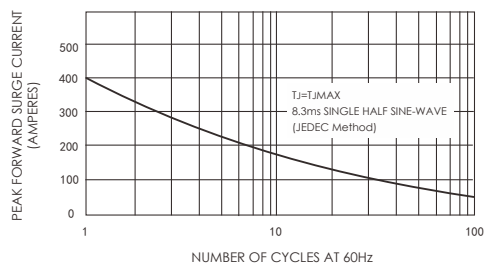


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

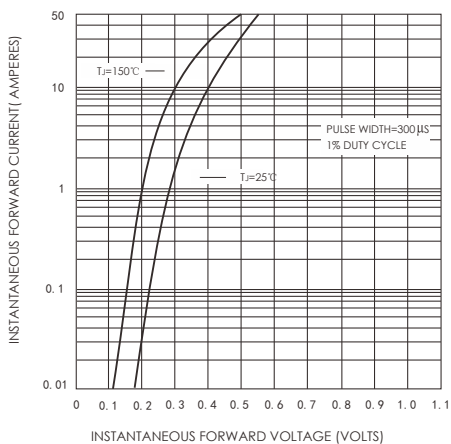


FIG.4-TYPICAL REVERSE CHARACTERISTICS

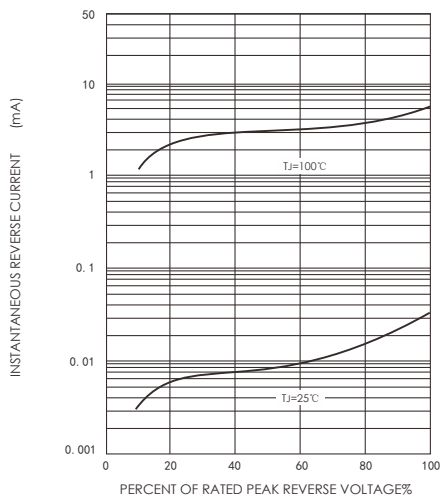
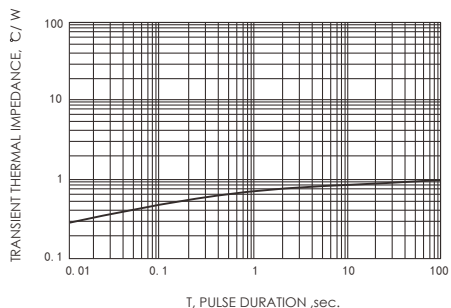
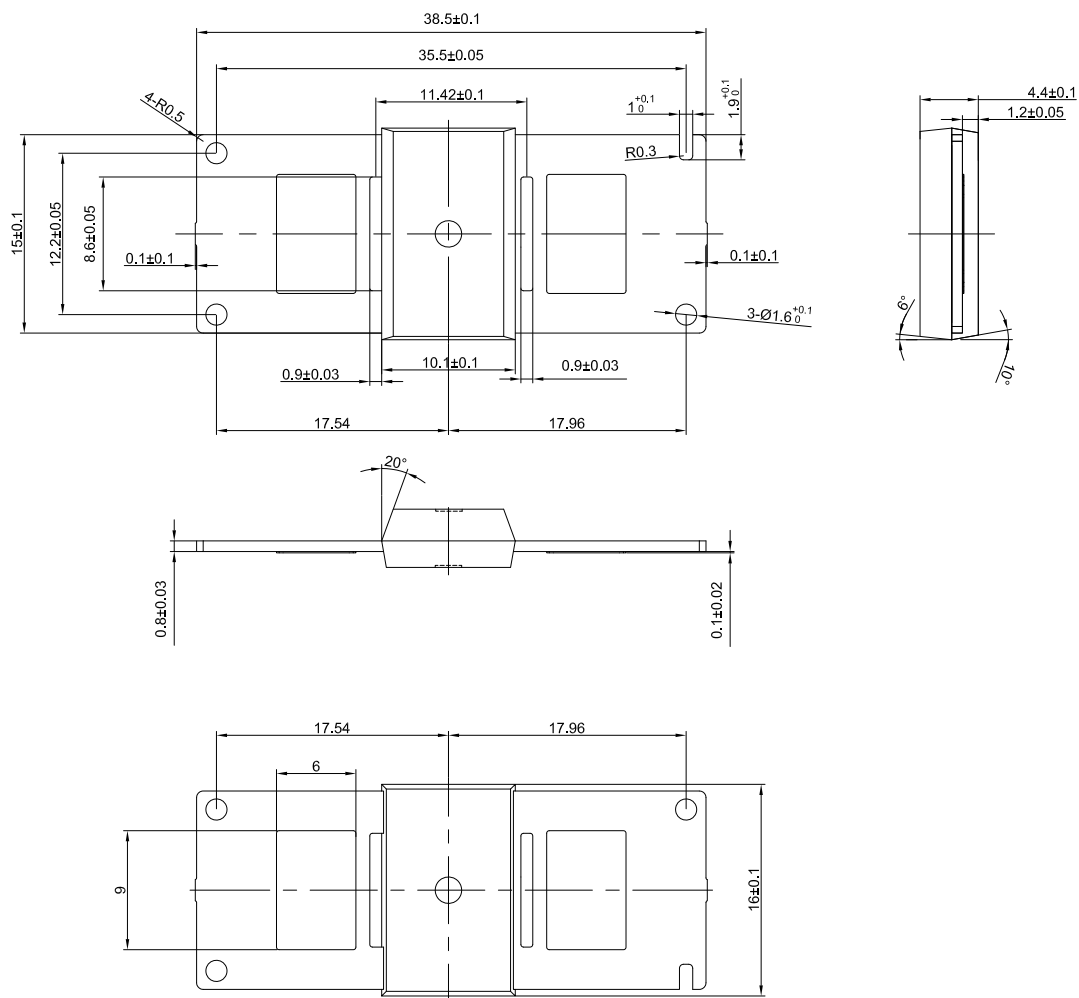


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE



# PACKAGE OUTLINE DIMENSIONS



Dimensions in millimeters

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