

**Photovoltaic Solar Cell Protection  
Schottky Diode****Features**

- Low power loss, high efficiency
- High current capability, low  $V_F$
- High surge capacity

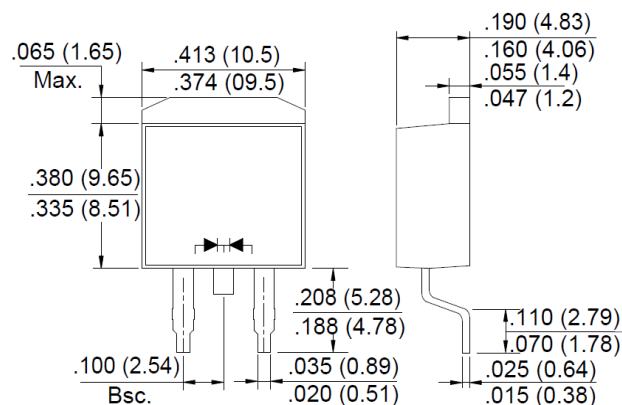
**Mechanical Data**

- Case: JEDEC D2PAK molded plastic
- Polarity: Polarity: As marked on the body
- Mounting position: Any

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

**Applications**

- For use in solar cell junction box as a bypass diode

**Reverse Voltage - 45 Volts  
Forward Current - 40.0 Amperes****D2PAK****RoHS  
COMPLIANT**

Package Outline Dimensions in Inches (Millimeters)

**Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	TP4045C	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	45	V
Maximum RMS Voltage	$V_{RMS}$	31.5	V
Maximum DC Blocking Voltage	$V_{DC}$	45	V
Maximum Average Forward Rectified Current ( See Fig.1 ) @ $T_C=95^{\circ}C$	$I_{(AV)}$	40	A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load ( JEDEC Method )	$I_{FSM}$	400	A
Peak Forward Voltage at 20A DC ( Note1 )	$V_F$	0.59	V
Maximum DC Reverse Current at Rated DC Bolcking Voltage @ $T_J=25^{\circ}C$	$I_R$	0.1	mA
Maximum DC Reverse Current at Rated DC Bolcking Voltage @ $T_J=100^{\circ}C$		50	
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	1.5	$^{\circ}C/W$
Junction Temperature Range	$T_J$	-55 to +200	$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to +200	$^{\circ}C$

Notes: 300uS pulse width, 2%duty cycle. 300uS.



Fig. 1 - Forward Current Derating Curve

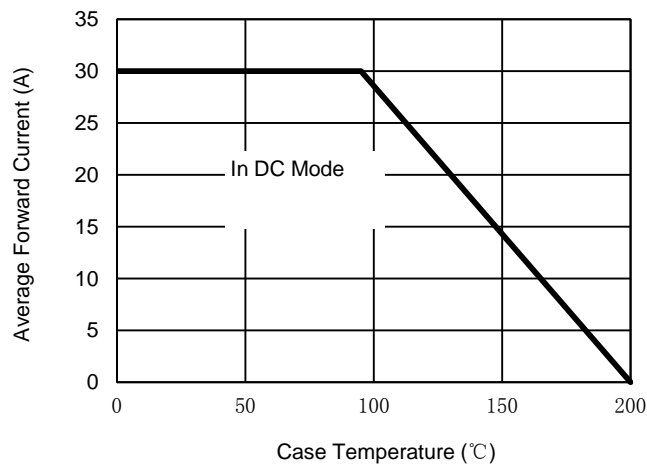


Fig. 2 - Maximum Non-Repetitive Surge Current

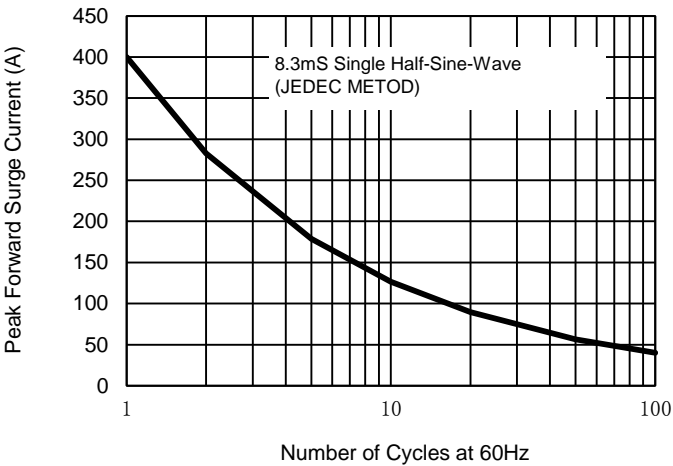


Fig. 3 - Typical Reverse Characteristics

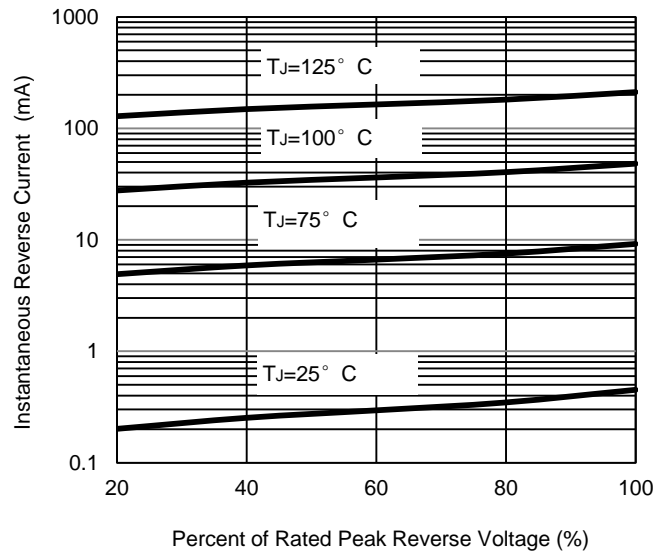
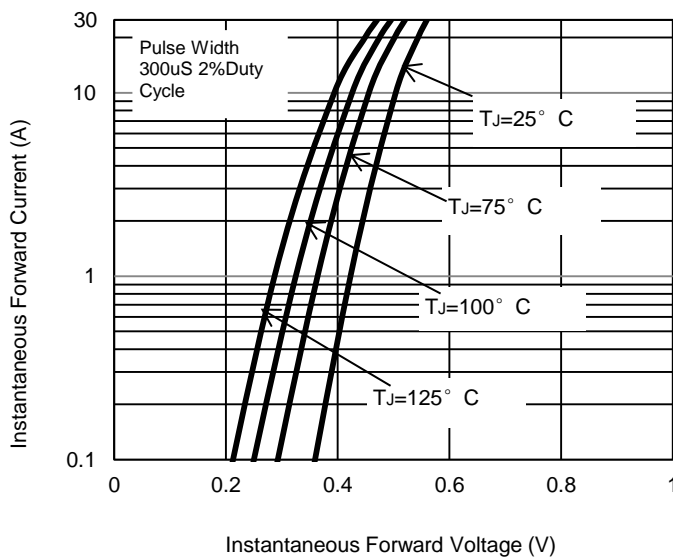


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.



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