

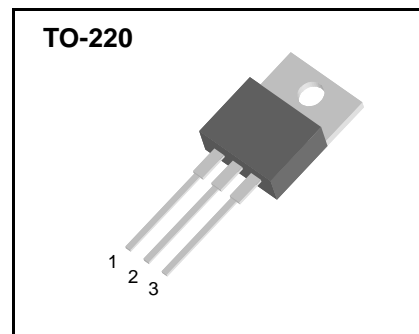
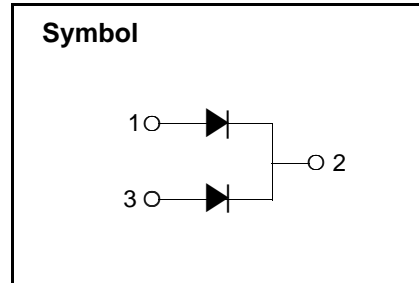
## 16A Schottky Barrier Rectifier

### Features

- ◆ Plastic material meets UL94V-0
- ◆ Metal silicon junction
- ◆ Very low forward voltage drop
- ◆ High current / High surge capability
- ◆ Guarding for over voltage protection
- ◆ Lead solderable per MIL-STD202,method 208 guaranteed
- ◆ Lead temperature for soldering purpose 250°C Max for 10 second
- ◆ Weight : 2.2 gram (approximately)

### General Description

The P16M40CT schottky Rectifier has been designed for applications requiring low forward voltage drop and switching power supply, dc-dc converter, free-wheeling diode, battery charging, polarity protection application.



### Absolute Maximum Ratings

Symbol	Parameter	Value	Units
$V_{RRM}$	Repetitive Peak Reverse Voltage	40	V
$V_R$	Maximum DC Reverse Voltage	40	V
$I_{F(AV)}$	Average Forward Current @ $T_C = 95^\circ\text{C}$	8 16	A A
$I_{FSM}$	Non-Repetitive Peak Surge Current (Surge applied at rated load conditions half sinewave, single phase, 60Hz)	250	A
Eas	Non-Repetitive Avalanche Energy @ $T_C=25^\circ\text{C}$ , $V_{dd} = 15\text{V}$ , $L=18\mu\text{H}$	6.0	mJ
$T_J$	Maximum Junction Temperature	- 65 ~ 125	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	- 65 ~ 150	$^\circ\text{C}$

### Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JC}$	Maximum Thermal Resistance, Junction-to-Case ( per diode )	2.5	$^\circ\text{C/W}$

# P16M40CT

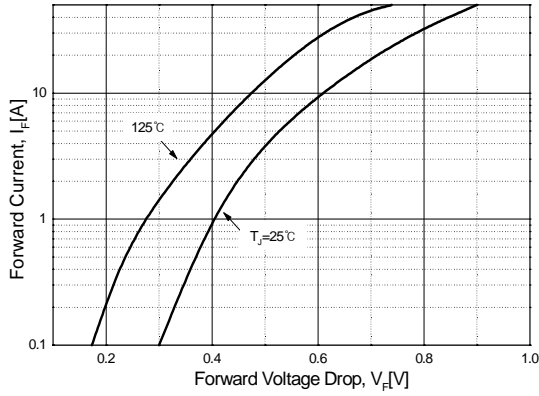
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## Electrical Characteristics

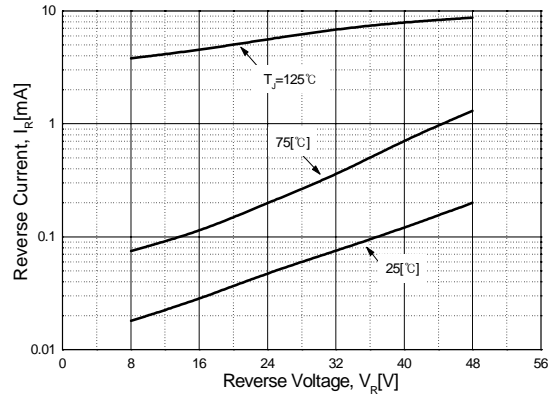
Symbol	Parameter	Min	Typ	Max	Units
$I_R$	Reverse Leakage Current $V_R = V_{RRM}$ $T_C = 25\text{ }^\circ\text{C}$ $T_C = 125\text{ }^\circ\text{C}$	-	-	1 50	mA
$V_F$	Forward Voltage Drop $I_F = 8\text{ A}$ $T_C = 25\text{ }^\circ\text{C}$ $I_F = 8\text{ A}$ $T_C = 125\text{ }^\circ\text{C}$ $I_F = 16\text{ A}$ $T_C = 25\text{ }^\circ\text{C}$ $I_F = 16\text{ A}$ $T_C = 125\text{ }^\circ\text{C}$	-	-	0.55 0.50 0.70 0.62	V
$C_T$	Typical Junction Capacitance @ $f_T=1\text{MHz}$ , $V_R=4\text{V}$ , $T_J=25\text{ }^\circ\text{C}$			700	pF



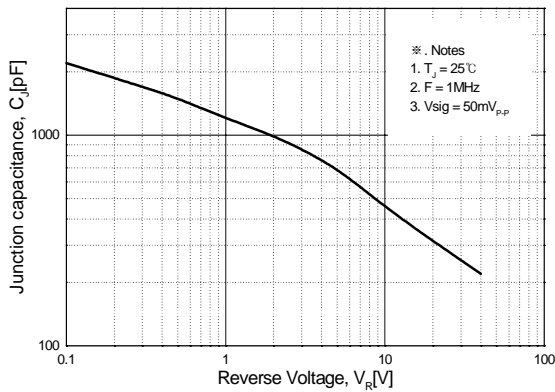
**Fig 1. VF-IF Characteristic**



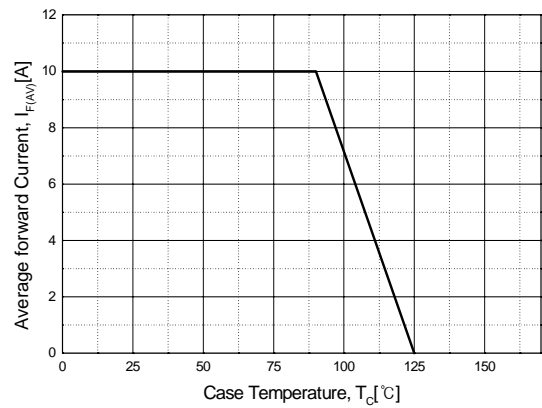
**Fig 2. VR-IR Characteristic**



**Fig 3. Typical junction capacitance**



**Fig 4. Forward current derating curve**



**Fig 5. Maximum non-repetitive forward surge current per diode**

