

GSD10V45S

Ultra-Low VF Surface Mount Schottky Barrier Rectifiers

Product Description

Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

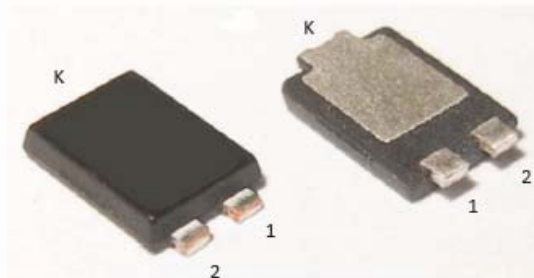
Features

- High Performance Forward Voltage Drop
- Reliable High Temperature Operation
- Softest, fast switching capability
- 150°C Operating Junction Temperature
- Lead Free Finish, RoHS Compliant
- Green Molding Compound (No Br, Sb)

Mechanical Data

- Case : TO-277A
- Molder Plastic : UL Flammability Classification Rating 94V-0
- Device Weight : 0.003 ounces (0.093grams)

Packages



TO-277A

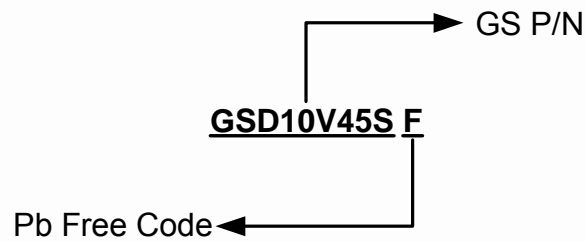
Marking Information

Part Number	Package	Marking	Equivalent Circuit Diagram
GSD10V45SF	TO-277A	10V45 YM A	

※ "10V45" GS P/N

※ "YM" Date Code & "A" GS Code

Ordering Information



Part Number	Package	Quantity
GSD10V45SF	TO-277A	5000 PCS

Maximum Ratings and Electrical Characteristics

Rating 25°C Ambient Temperature Unless Otherwise Specified.

Symbol	Conditions	Values	Unit
V_{RRM}	Maximum Peak Repetitive Reverse Voltage	45	V
V_{RWM}	Maximum Working Peak Reverse Voltage	45	V
V_{RM}	Maximum DC Blocking Voltage	45	V
V_F^*	Instantaneous Forward Voltage At 10A	$T_J=25^\circ\text{C}$	0.47
	Instantaneous Forward Voltage At 10A	$T_J=125^\circ\text{C}$	0.39~0.42
I_O	Average Rectified Forward Current (Rated V_R -20Khz Square Wave) - 50% duty cycle	10	A
I_{FSM}	Peak Forward Surge Current - 1/2 60hz	275	A
I_{RRM}	Peak Repetitive Reverse Surge Current (2uS-1Khz)	2	A
I_R	Instantaneous Reverse Current At V_{RM}	$T_J=25^\circ\text{C}$	0.5
		$T_J=125^\circ\text{C}$	100
dv/dt	Maximum Rate of Voltage Change (at Rated V_R)	10000	V/uS
$R_{\theta JA}$	Typical Thermal Resistance	60	°C/W
T_J	Junction Temperature Range	-40 to +150	°C
T_{STG}	Storage Temperature Range	-40 to +150	°C

* Pulse width < 300 uS, Duty cycle < 2%

Typical Characteristics

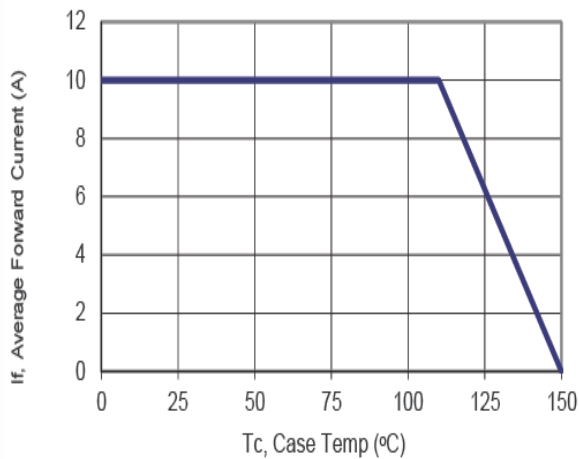


Figure 1: Current Derating, Case

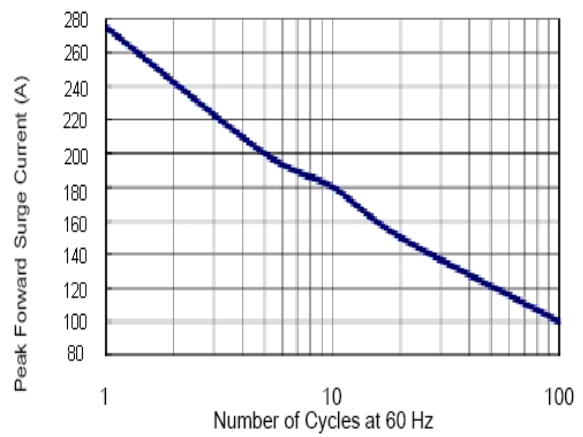


Figure 2: Maximum Repetitive Surge Current

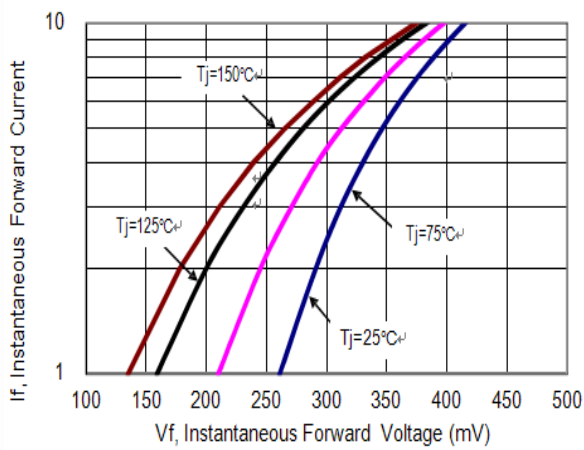


Figure 3: Typical Reverse Current

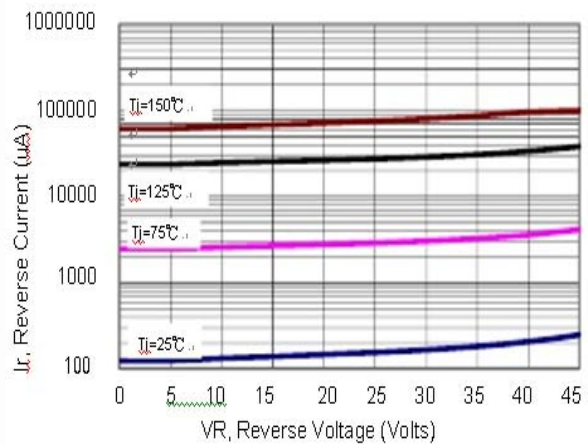


Figure 4: Typical Forward Voltage

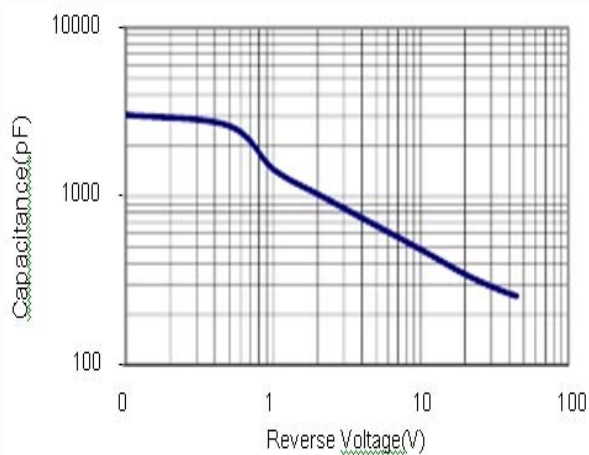
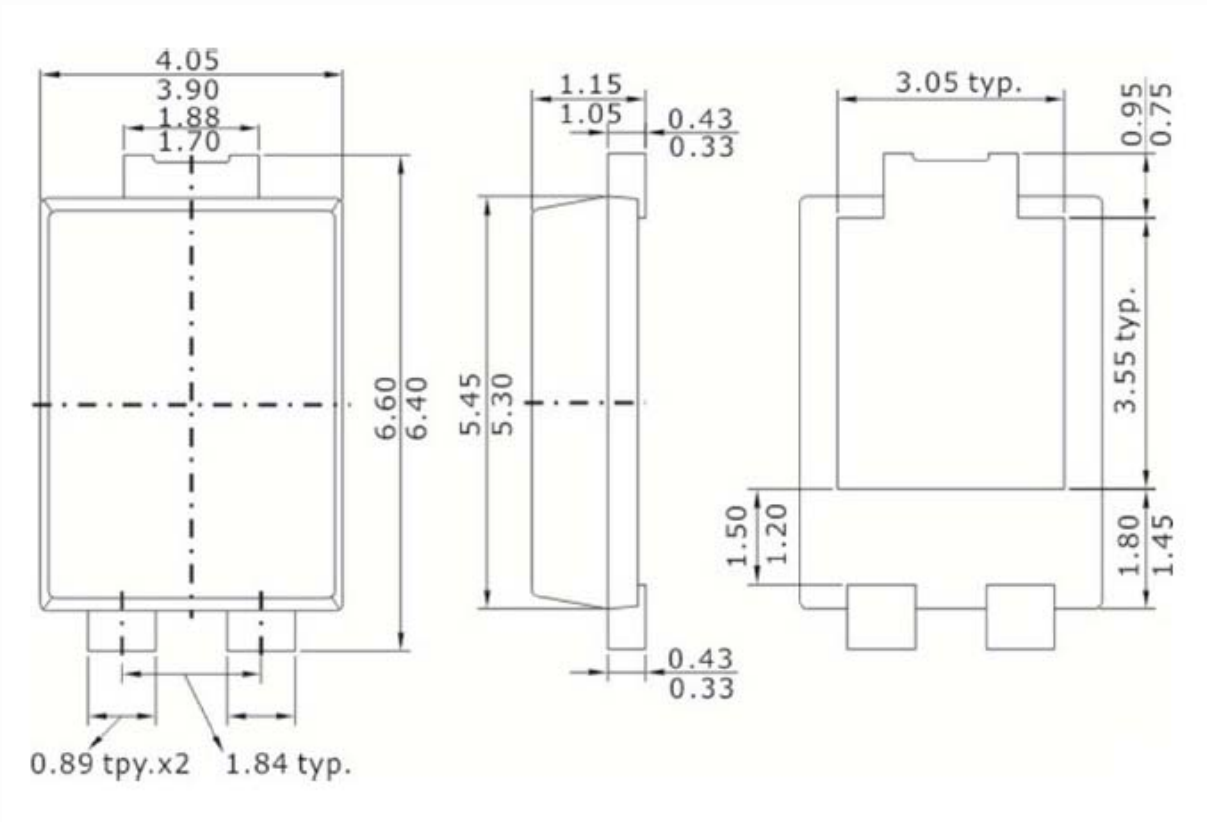


Figure 5: Typical Junction Capacitance

Package Dimension

TO-277A



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