

GSDST20100TIF

20Amp Schottky Barrier Rectifier

Product Description

It is a Low V_F Trench MOS Schottky Rectifiers.
Repetitive Peak Reverse Voltage is 200V.

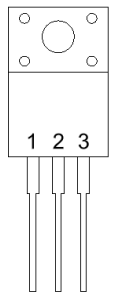
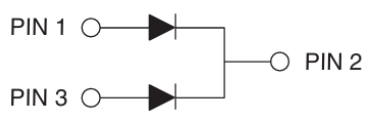
Features

- Trench MOS schottky technology
- High forward surge current capability

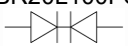
Mechanical Data

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- 260 °C /10 seconds at terminals
- RoHS Compliant and Halogen Free

Packages & Pin Assignments

TO-220F-3L		Equivalent Circuit	
			
Pin	Description	Pin	Description
1	Anode 1	2	Common Cathode
3	Anode 2		

Ordering and Marking Information

Ordering Information			
Part Number	V_{RRM}	Marking Code	Quantity/Tube
GSDST20100TIF	100	□□□ MBR20L100FCT 	50 PCS
Marking Information			
- □□□ is GS Code			

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	100	V
I_o	Average Rectified Forward Current	20	A
I_{FSM}	Peak Non-Repetitive Forward Current (8.3ms single half sine wave)	200	A
I^2t	Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ (Per Diode)	167	A^2s
V_{ISO}	Isolation Voltage	1500	V_{AC}
$R_{\theta JC}$	Thermal Resistance between Junction to Case	4	$^{\circ}\text{C}/\text{W}$
T_J	Junction Temperature	-55 to +150	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_F	Forward Voltage	$I_F=10\text{A}$, $T_J = 25^{\circ}\text{C}$			0.75	V
I_R	Reverse Current	$V_R= V_{RRM}$, $T_J = 25^{\circ}\text{C}$			0.03	mA
		$V_R= V_{RRM}$, $T_J = 125^{\circ}\text{C}$			20	

Typical Characteristics (Ratings at 25°C Ambient Temperature Unless Otherwise Specified.)

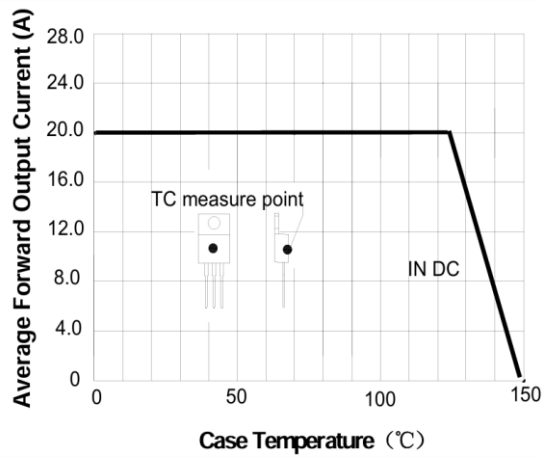


Figure 1. Derating Curve Output Rectified Current

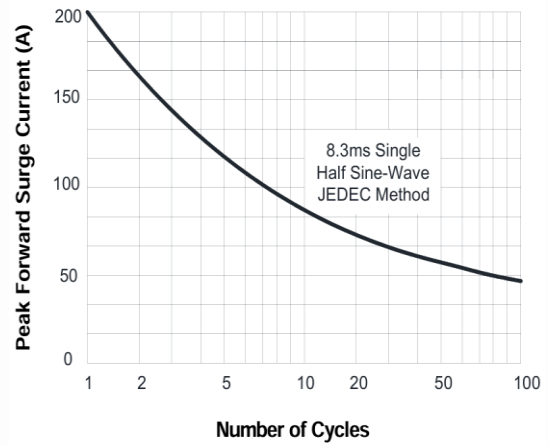


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

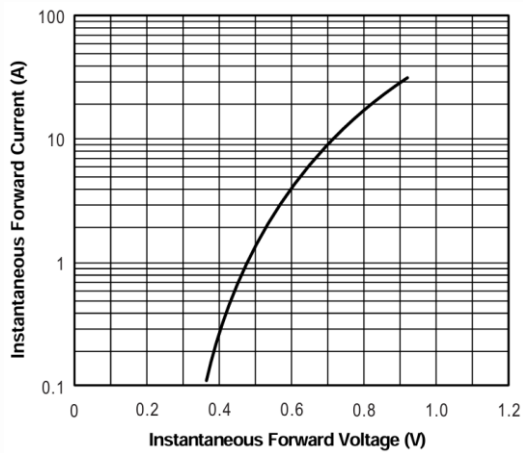


Figure 3. Typical Forward Voltage Characteristics

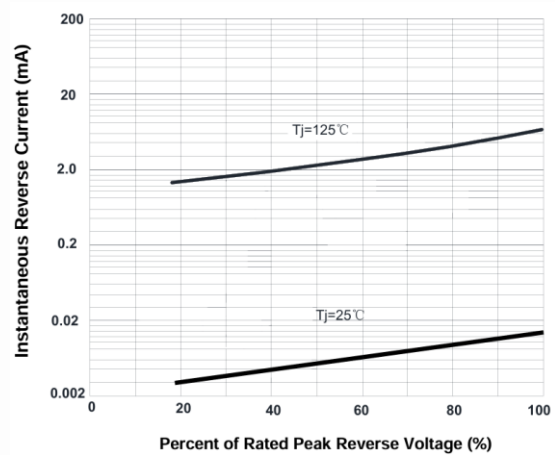
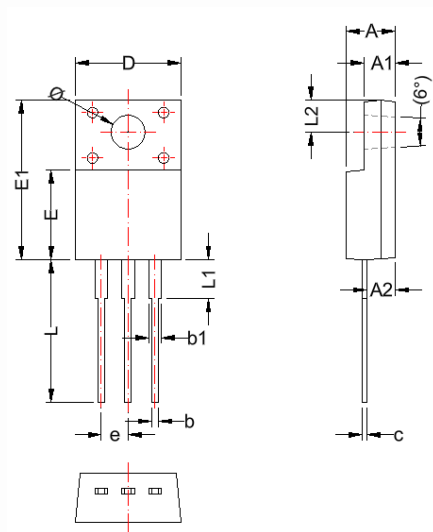


Figure 4. Typical Reverse Leakage Characteristics

TO-220F-3L

Package Dimension



Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	4.55	4.75	0.179	0.187
A1	2.40	2.60	0.094	0.102
A2	2.60	3.05	0.102	0.120
b	0.50	0.80	0.020	0.031
b1	1.05	1.35	0.041	0.053
c	0.40	0.60	0.016	0.024
D	9.90	10.10	0.390	0.398
E	8.35	8.65	0.329	0.341
E1	14.90	15.30	0.587	0.602
e	2.45	2.65	0.096	0.104
L	13.35	13.65	0.526	0.537
L1	3.45	3.95	0.136	0.156
L2	2.90	3.10	0.114	0.122
Ø	3.10	3.30	0.122	0.130

NOTE:

Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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