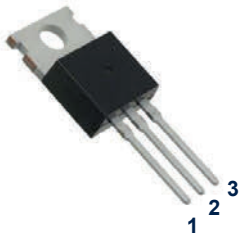
GSR1020CT thru GSR10200CT

Schottky Barrier Rectifiers

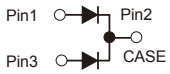
Reverse Voltage 20V-200V Forward Current 10A

Features

- Plastic package has underwriters laboratory flammability classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for over voltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Dual rectifier construction
- High temperature soldering guaranteed: 260°C/10 seconds, 0.25" (6.35mm) from case
- Component in accordance to RoHS 2011/65/EU



TO-220AB



Schematic Diagram

Mechanical Data

- Case: JEDEC TO-220AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any

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%.)

Parameters		Symbols	GSR 1020CT	GSR 1030CT	GSR 1040CT	GSR 1045CT	GSR 1060CT	GSR 10100CT	GSR 10150CT	GSR 10200CT	Units
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	30	40	45	60	100	150	200	V
Maximum RMS Voltage		V_{RMS}	14	21	28	32	42	70	105	140	V
Maximum DC Blocking Voltage		V_{DC}	20	30	40	40	60	100	150	200	V
Maximum Average Forward Rectified Current (see Fig.1)	Per leg	$I_{(AV)}$	5.0								A
	Total device		10.0								
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)		I_{FSM}	150.0								A
Maximum Instantaneous Forward Voltage at 5.0 A per leg[1]		V_F	0.60				0.75	0.85	0.90	0.95	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage[1]	T_A=25°C	I_R	100					30			μA
	T_A=100°C		5					-			mA
	T_A=125°C		-					3			
Typical Thermal Resistance[2]		$R_{\theta JC}$	2.5								°C/W
Operating Junction Temperature Range		T_J	-55 to +150								°C
Storage Temperature Range		T_{STG}	-55 to +150								°C

Notes:
1. Pulse test: 300μs pulse width, 1% duty cycle.
2. Thermal resistance from junction to case.

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Ratings and Characteristics Curves

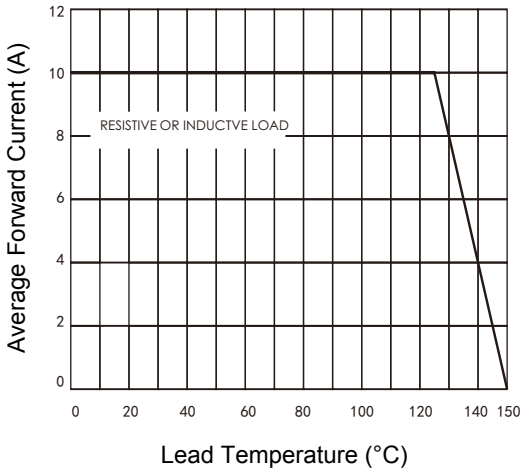

Figure 1. Forward Current Derating Curve

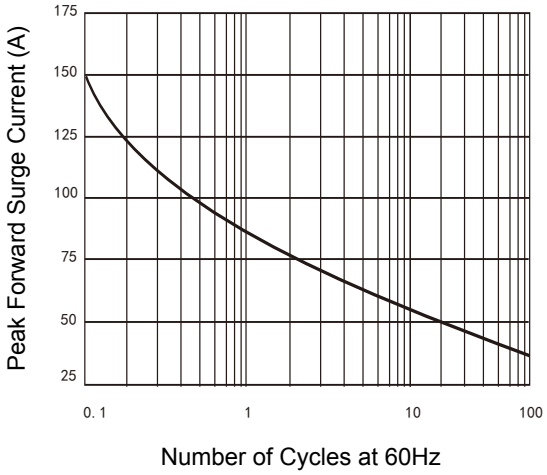

Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

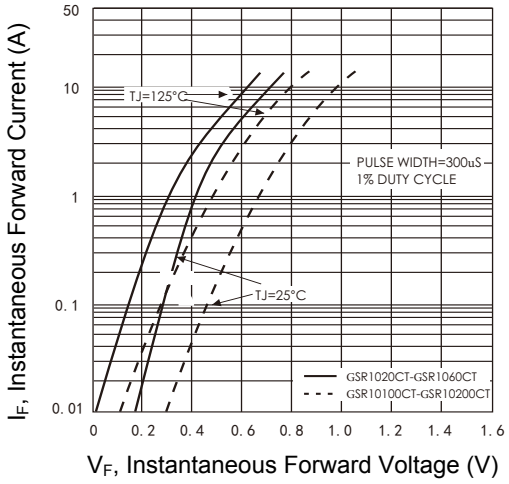

Figure 3. Typical Instantaneous Forward Characteristics

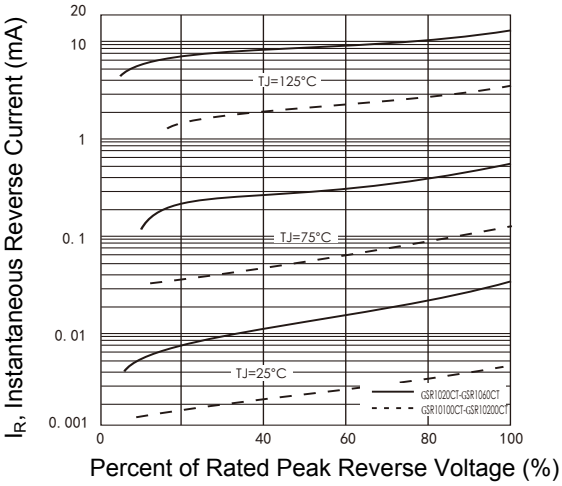

Figure 4. Typical Reverse Characteristics

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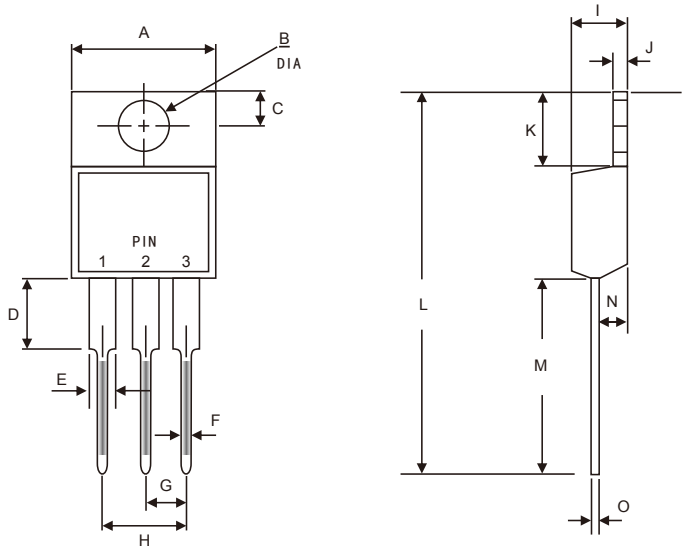
Package Outline Dimensions (TO-220AB)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	9.91	10.41	0.390	0.410
B	3.74	4.10	0.147	0.161
C	2.60	2.90	0.102	0.114
D	3.50	4.05	0.138	0.159
E	1.20	1.34	0.047	0.053
F	0.68	0.94	0.027	0.037
G	2.41	2.67	0.095	0.105
H	4.88	5.28	0.192	0.208
I	4.44	4.70	0.175	0.185
J	1.14	1.39	0.045	0.055
K	6.20	7.20	0.244	0.283
L	28.10	29.50	1.106	1.161
M	13.10	14.22	0.516	0.560
N	2.50	2.90	0.098	0.114
O	0.35	0.58	0.014	0.023

Order Information

Device	Package	Marking	Carrier	Quantity
GSR1020CT	TO-220AB	SR1020CT	Tube	50pcs / Tube
GSR1030CT	TO-220AB	SR1030CT	Tube	50pcs / Tube
GSR1040CT	TO-220AB	SR1040CT	Tube	50pcs / Tube
GSR1045CT	TO-220AB	SR1045CT	Tube	50pcs / Tube
GSR1060CT	TO-220AB	SR1060CT	Tube	50pcs / Tube
GSR10100CT	TO-220AB	SR10100CT	Tube	50pcs / Tube
GSR10150CT	TO-220AB	SR10150CT	Tube	50pcs / Tube
GSR10200CT	TO-220AB	SR10200CT	Tube	50pcs / Tube