

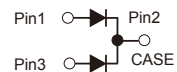
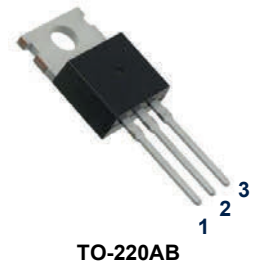
# GSR3045CT thru GSR30200CT

Schottky Barrier Rectifiers

Reverse Voltage 45V-200V Forward Current 30A

## 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
- Dual rectifiers
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed: 260°C/10 seconds, 0.25" (6.35mm) from case
- Component in accordance to RoHS 2011/65/EU



**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 3045CT	GSR 3060CT	GSR 30100CT	GSR 30150CT	GSR 30200CT	Units
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	45	60	100	150	200	V
Maximum RMS Voltage		$V_{RMS}$	32	42	70	105	140	V
Maximum DC Blocking Voltage		$V_{DC}$	45	60	100	150	200	V
Maximum Average Forward Rectified Current See Fig.1	Per leg	$I_{(AV)}$	15.0					A
	Total device		30.0					
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)		$I_{FSM}$	250.0					A
Maximum Instantaneous Forward Voltage at 15.0A		$V_F$	0.60	0.75	0.85	0.90	0.95	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage <sup>1</sup>	$T_A=25^\circ\text{C}$	$I_R$	100		20			$\mu\text{A}$
	$T_A=100^\circ\text{C}$		5		-			mA
	$T_A=125^\circ\text{C}$		-		3			
Typical Thermal Resistance, Junction-Case		$R_{\theta JC}$	2.5					$^\circ\text{C/W}$
Operating Junction Temperature Range		$T_J$	-55 to +150					$^\circ\text{C}$
Storage Temperature Range		$T_{STG}$	-55 to +150					$^\circ\text{C}$

Notes:

1. Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle

## Ratings and Characteristics Curves

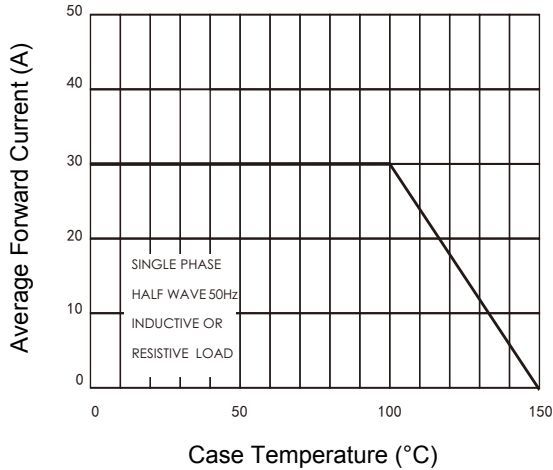


Figure 1. Forward Current Derating Curve

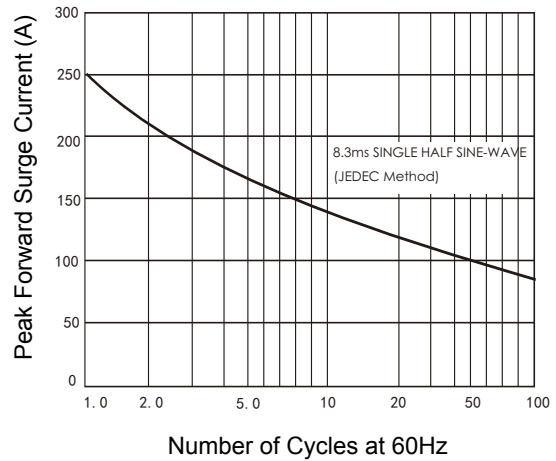


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

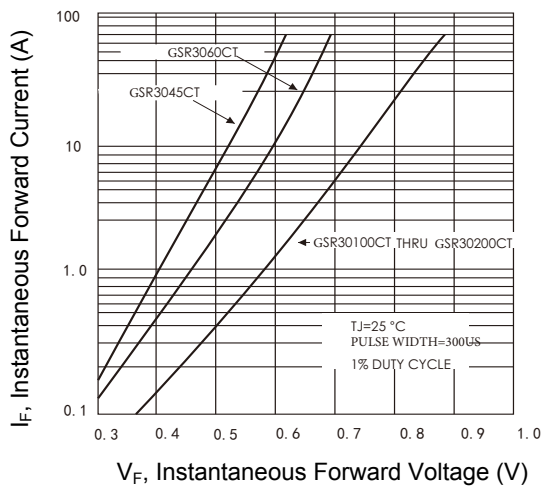


Figure 3. Typical Instantaneous Forward Characteristics

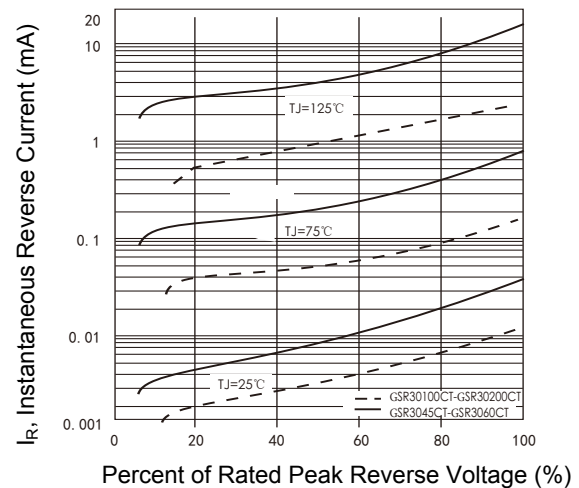


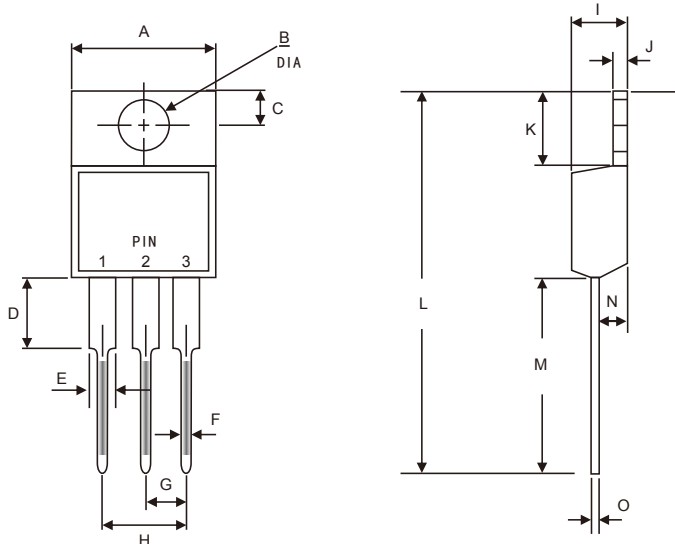
Figure 4. Typical Reverse Characteristics

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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
GSR3045CT	TO-220AB	SR3045CT	Tube	50pcs / Tube
GSR3060CT	TO-220AB	SR3060CT	Tube	50pcs / Tube
GSR30100CT	TO-220AB	SR30100CT	Tube	50pcs / Tube
GSR30150CT	TO-220AB	SR30150CT	Tube	50pcs / Tube
GSR30200CT	TO-220AB	SR30200CT	Tube	50pcs / Tube

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)