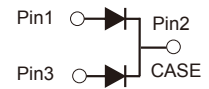


## Features

- 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
- High surge capability
- 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 2015/863/EU



**Schematic Diagram**

## Mechanical Data

- Case: JEDEC ITO-220AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: As marked
- Mounting position: Any
- Mounting torque: 10 in-lbs maximum

## Maximum Ratings and Electrical Characteristics

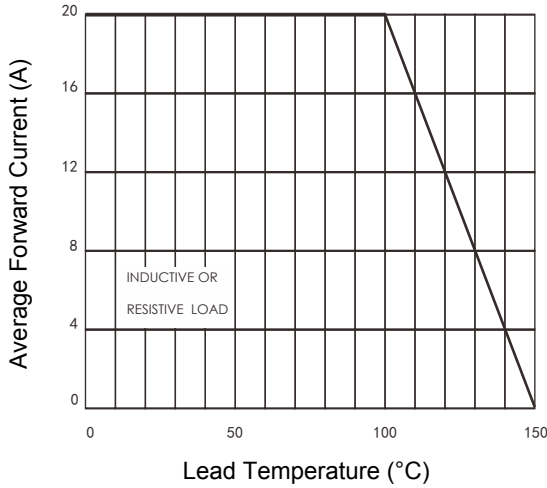
(Ratings at 25°C ambient temperature unless otherwise specified, Single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%.)

Parameter	Symbols	GSRF 2020CT	GSRF 2030CT	GSRF 2040CT	GSRF 2045CT	GSRF 2060CT	GSRF 20100CT	GSRF 20150CT	GSRF 20200CT	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	45	60	100	150	200	V	
Maximum Average Forward Rectified Current See Fig. 1	Per leg	10.0								A	
	Total device	20.0									
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	200.0								A	
Maximum Instantaneous Forward Voltage Per Diode @ $I_F=10A$	$V_F$	0.60				0.75	0.85	0.90	0.95	V	
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage <sup>1</sup>	$T_A=25^\circ C$	100					20				uA
	$T_A=100^\circ C$	5					-				mA
	$T_A=125^\circ C$	-					3				
Typical Thermal Resistance <sup>2</sup>	$R_{\theta JC}$	4.5								°C/W	
Operating Junction Temperature Range	$T_J$	-55 to +150								°C	
Storage Temperature Range	$T_{STG}$	-55 to +150								°C	

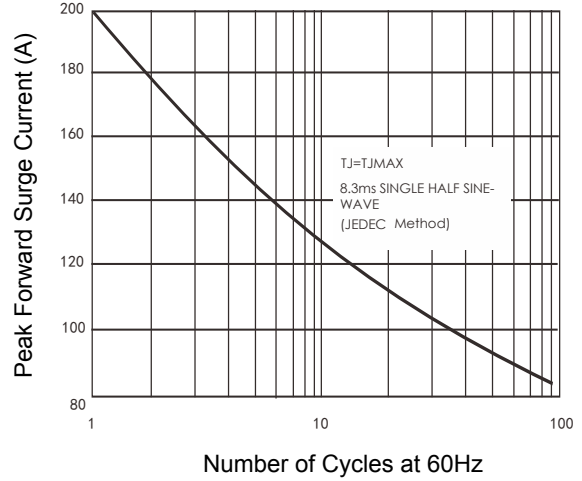
**Notes:**

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

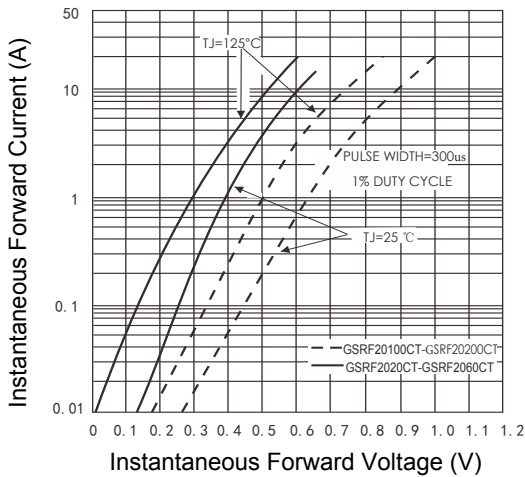
## Ratings and Characteristics Curves



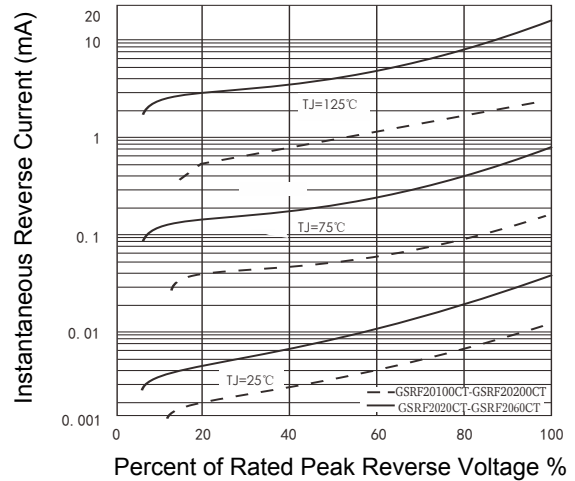
**Figure 1. Forward Current Derating Curve**



**Figure 2. Maximum Non-Repetitive Peak Forward Surge Current**



**Figure 3. Typical Instantaneous Forward Characteristics**



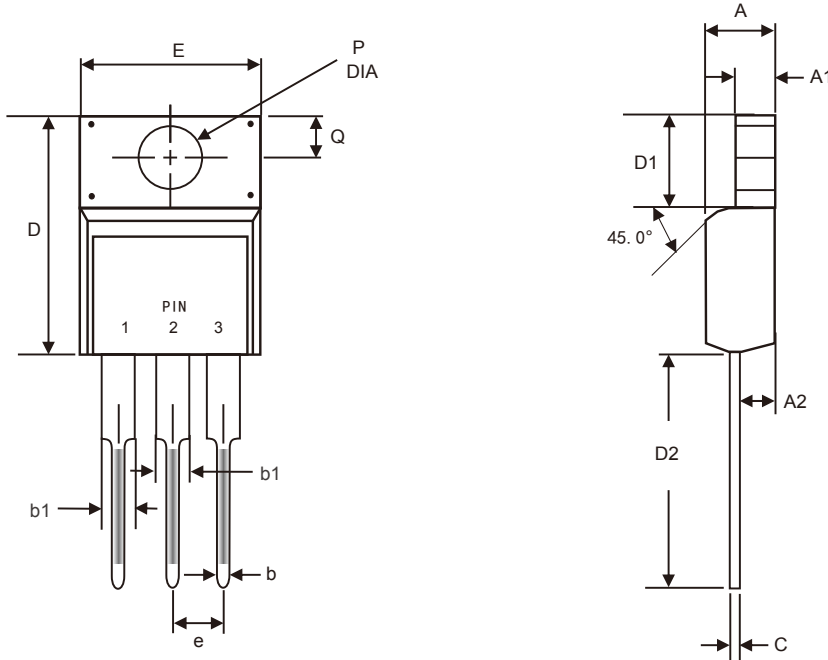
**Figure 4. Typical Reverse Characteristics**

# GSRF2020CT thru GSRF20200CT

Schottky Barrier Rectifiers

Reverse Voltage 20V to 200V Forward Current 20A

## Package Outline Dimensions (ITO-220AB)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.49	4.89	0.177	0.192
A1	2.28	2.88	0.090	0.113
A2	2.50	2.90	0.098	0.114
b	0.67	0.93	0.026	0.037
b1	1.10	1.43	0.043	0.056
C	0.37	0.63	0.015	0.025
D	15.40	16.40	0.606	0.646
D1	6.45	6.85	0.254	0.270
D2	12.50	13.50	0.492	0.531
e	2.44	2.64	0.096	0.104
E	9.91	10.41	0.390	0.410
Q	3.05	3.45	0.120	0.136
P	3.15	3.45	0.124	0.132

## Order Information

Device	Package	Marking	Quantity	HSF Status
GSRF2020CT	ITO-220AB	SRF2020CT	50pcs / Tube	RoHS Compliant
GSRF2030CT	ITO-220AB	SRF2030CT	50pcs / Tube	RoHS Compliant
GSRF2040CT	ITO-220AB	SRF2040CT	50pcs / Tube	RoHS Compliant
GSRF2045CT	ITO-220AB	SRF2045CT	50pcs / Tube	RoHS Compliant
GSRF2060CT	ITO-220AB	SRF2060CT	50pcs / Tube	RoHS Compliant
GSRF20100CT	ITO-220AB	SRF20100CT	50pcs / Tube	RoHS Compliant
GSRF20150CT	ITO-220AB	SRF20150CT	50pcs / Tube	RoHS Compliant
GSRF20200CT	ITO-220AB	SRF20200CT	50pcs / Tube	RoHS Compliant