

### FEATURES

- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High forward surge capability
- High frequency operation
- Solder dip 275°C maximum,10s,per JESD22-B106
- Component in accordance to RoHS 2011/65/EU



TO-220AC

SR20100L



ITO-220AC

SRF20100L



Dimensions in inches and (millimeters)

### MECHANICAL DATA

- Case: JEDEC TO-220AC、ITO-220AC
- Molding compound meets UL94V-0 flammability rating
- Terminals: Lead solderable per J-STD-002 and JESD22-B102
- Polarity: As marked
- Mounting Torque: 10 in-lbs maximum

### TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

#### PRIMARY CHARACTERISTICS

$I_F(AV)$	20A
$V_{RRM}$	100V
$I_{FSM}$	200A
$V_F$ at $I_F=20.0A(125^\circ C)$	0.67V
$I_R$	20 $\mu A$
$T_J(MAX)$	150°C
Package	TO-220AC, ITO-220AC
Diode variations	Single

### MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	SR20100L, SRF20100L	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum average forward rectified current (see fig.1)	$I_F(AV)$	20.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated $T_L$ )	$I_{FSM}$	200	A
Peak repetitive reverse current per diode at $t_p=2 \mu s$ 1KHz	$I_{RRM}$	0.5	A
Operating junction and Storage temperature range	$T_J, T_{stg}$	-55 to+150	°C
Isolation voltage (ITO-220AB only) from terminals to heatsink $t=1$ min	$V_{AC}$	1500	V

## RATINGS AND CHARACTERISTIC OF SR20100L,SRF20100L

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	I <sub>F</sub> =20.0A	T <sub>A</sub> =25°C	V <sub>F</sub> <sup>1)</sup>	0.72	0.75	V
		T <sub>A</sub> =100°C		0.69	—	
		T <sub>A</sub> =125°C		0.67	—	
	I <sub>F</sub> =10.0A	T <sub>A</sub> =25°C		0.56	0.59	
		T <sub>A</sub> =100°C		0.55	—	
		T <sub>A</sub> =125°C		0.53	—	
Reverse current	V <sub>R</sub> =100V	T <sub>A</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	20	50	μA
		T <sub>A</sub> =100°C		2	5	mA
		T <sub>A</sub> =125°C		10	20	
Typical junction capacitance	4V, 1MHz		C <sub>J</sub>	570		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width≤40ms

### THERMAL CHARACTERISTICS

Parameter	Symbol	SR20100L	SRF20100L	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJC</sub>	2.5	4.5	°C/W

3.Thermal resistance from junction to case

### AVAILABLE PACK INFORMATION

Product code	Pack	Box Size L×W×H(mm)	Quantity (pcs/box)	Carton SizeL×W×H(mm)	Quantity (box/carton)
SR20100L-TO-220AC	P/T	558×148×38	1000	565×225×170	5
SRF20100L-ITO-220AC	P/T	558×148×38	1000	565×225×170	5

# RATINGS AND CHARACTERISTIC OF SR20100L,SRF20100L

FIG.1-FORWARD CURRENT DERATING CURVE

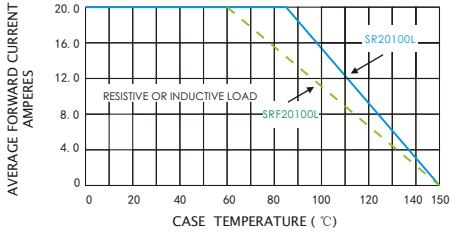


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

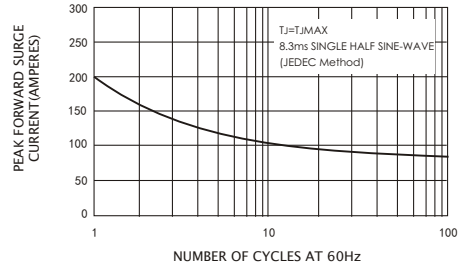


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

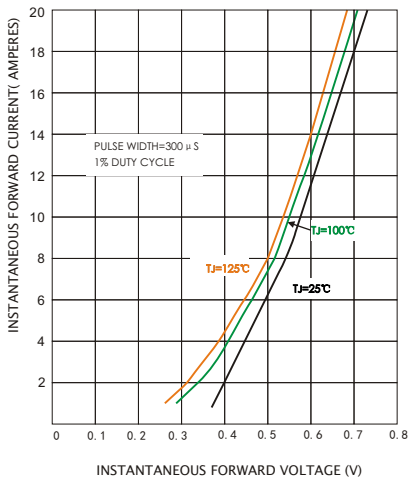


FIG.4-TYPICAL REVERSE CHARACTERISTICS

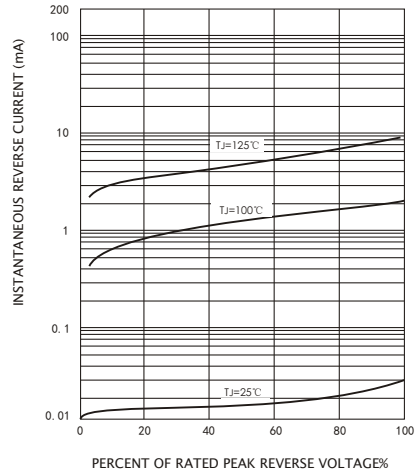
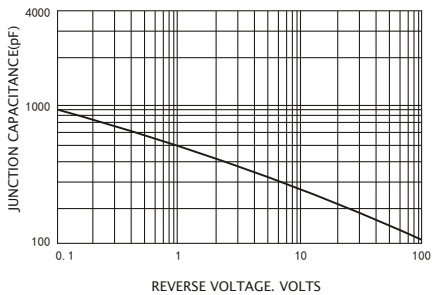
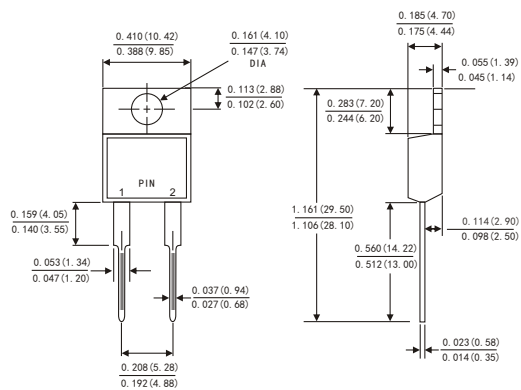


FIG.5-TYPICAL JUNCTION CAPACITANCE



# PACKAGE OUTLINE DIMENSIONS

## TO-220AC



## ITO-220AC

