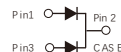


## FEATURES

- 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
- Meets MSL Level 1, per J-STD-020,LF MAX peak of 245°C (for TO-263 package)
- Solder bath temperature 275°C maximum, 10s, per JESD22-B106 (for TO-220AB and ITO-220AB package)
- Component in accordance to RoHS 2011/65/EU



TO-220AB



ITO-220AB



TO-263

SR60100LD1



## MECHANICAL DATA

- Case: JEDEC TO-220AB, ITO-220AB, TO-263
- 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

## MAXIMUM RATINGS

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

PRIMARY CHARACTERISTICS	
$I_F(AV)$	2×30A
$V_{RRM}$	100V
$I_{FSM}$	300A
$V_F$ at $I_F=30.0A$ ,Per leg, $T_J=125^{\circ}C$	0.68V,Typ
$I_R$ , $T_J=25^{\circ}C$	15μA Typ
$T_J(MAX)$	150°C
Package	TO-220AB, ITO-220AB, TO-263
Diode variations	Common cathode

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum average forward rectified current (see fig.1)	Per leg	30.0	A
	Total device	60.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	300	A
Peak repetitive reverse current per diode at $t_p=2\mu s$ 1KHz	$I_{RRM}$	0.5	A
Storage temperature range	$T_{stg}$	-55 to +150	°C
Operating junction temperature range	$T_J$	-55 to +150	°C

# RATINGS AND CHARACTERISTIC OF SR60100LCT,SRF60100LCT,SR60100LD1

## ELECTRICAL CHARACTERISTCS (TA=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	Tj=25°C	If=5.0A	VF 1)	0.44	-	V
		If=10.0A		0.52	-	
		If=15.0A		0.59	-	
		If=20.0A		0.66	-	
		If=30.0A		0.76	0.80	
	Tj=125°C	If=5.0A		0.35	-	
		If=10.0A		0.48	-	
		If=15.0A		0.56	-	
		If=20.0A		0.61	-	
		If=30.0A		0.68	0.72	
Reverse current	VR=100V	TA=25°C	IR 2)	15	50	μA
		TA=100°C		3.5	-	mA
		TA=125°C		15	-	
Typical junction capacitance	4V,1MHz		CJ	1200		pF

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

2.Pulse test: pulse width≤40ms

## THERMAL CHARACTERISTCS

Parameter	Symbol	TO-220AB	ITO-220AB	TO-263	Unit
Typical thermal resistance 3)	Rθjc	0.5	1.5	0.5	°C/W

3.Thermal resistance from junction to case

## AVAILABALE PACK INFORMATION

Product code	Pack	Box Size L×W×H(mm)	Quantity(pcs/box)	Carton SizeL×W×H(mm)	Quantity(box/carton)
SR60100LCT-TO-220AB	P/T	558×148×38	1000	565×225×170	5
SRF60100LCT-ITO-220AB	P/T	558×148×38	1000	565×225×170	5
SR60100LD1-TO-263	P/T	558×148×38	1000	565×225×170	5

# RATINGS AND CHARACTERISTIC OF SR60100LCT,SRF60100LCT,SR60100LD1

FIG.1-FORWARD CURRENT DERATING CURVE

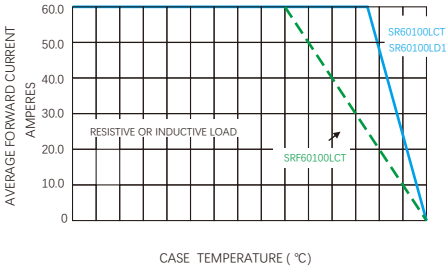


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

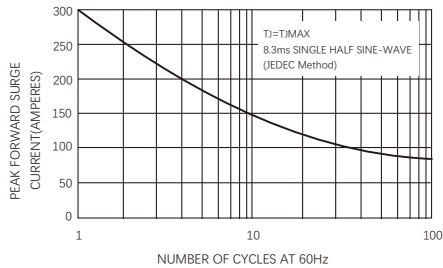


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

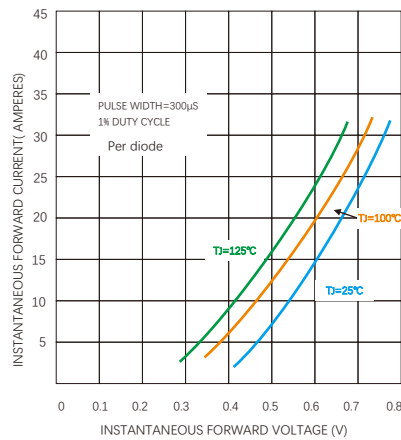


FIG.4-TYPICAL REVERSE CHARACTERISTICS

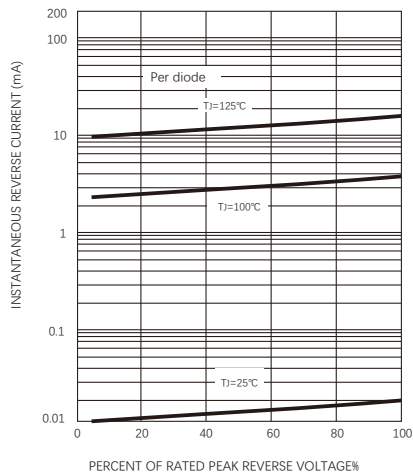
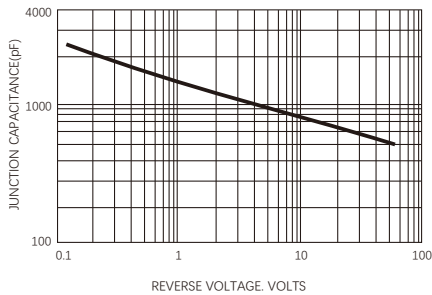
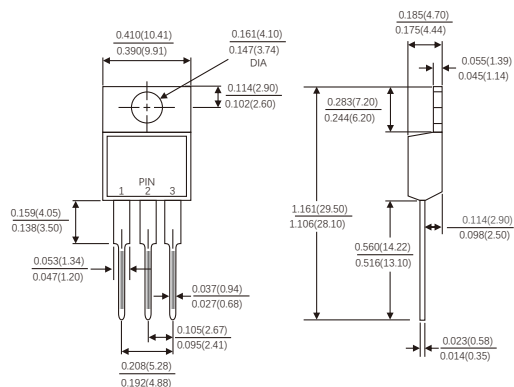


FIG.5-TYPICAL JUNCTION CAPACITANCE

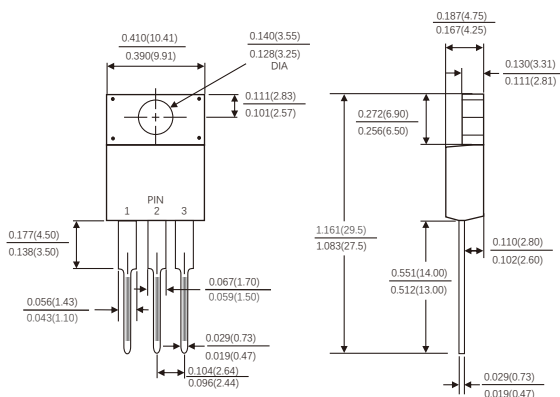


# PACKAGE OUTLINE DIMENSIONS

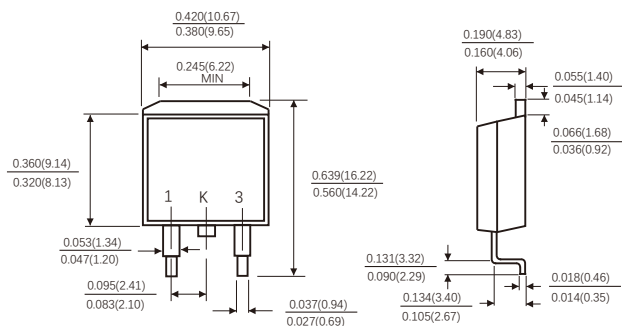
## TO-220AB



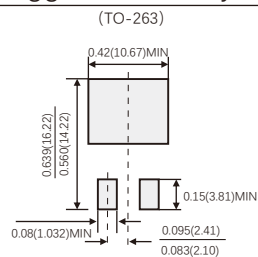
## ITO-220AB



## TO-263



## Suggested Pad Layout



Dimensions in inches and (millimeters)