

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
- Per J-STD-020,LF MAX peak of 260°C (for TO-263,252 package)
- Solder bath temperature 275°C maximum, 10s, per JESD22-B106 (for TO-220AB and ITO-220AB package)
- Component in accordance to RoHS 2015/863/EU



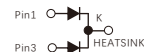
TO-220AB



ITO-220AB



TO-252
SR1060LM1



TO-263
SR1060LD1



MECHANICAL DATA

- Case: JEDEC TO-220AB、ITO-220AB、TO-263、TO-252
- 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

$I_F(AV)$	2×5A
V_{RRM}	60V
I_{FSM}	150A
V_F at $I_F=5.0A(125^{\circ}C)$	0.43V
I_R	60μA
$T_J(MAX)$	150°C
Package	TO-220AB, ITO-220AB, TO-263, TO-252
Diode variations	Common cathode

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	60	V
Maximum average forward rectified current (see fig.1)	$I_F(AV)$	5.0	A
		10.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L , Total device)	I_{FSM}	150	A
Peak repetitive reverse current per diode at $t_p=2\mu s$ 1KHzPer leg	I_{RRM}	1.0	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

ELECTRICAL CHARACTERISTICS (Per leg,T_A=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =5.0A	T _A =25°C	V _F ¹⁾	0.47	0.55	V
		T _A =100°C		0.44	-	
		T _A =125°C		0.42	-	
	I _F =3.0A	T _A =25°C		0.43	0.51	
		T _A =100°C		0.36	-	
		T _A =125°C		0.34	-	
Reverse current	V _R =60V	T _A =25°C	I _R ²⁾	-	150	μA
		T _A =100°C		-	15	mA
		T _A =125°C		-	50	
Typical junction capacitance	4V,1MHz		C _J	640		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SR1060LCT	SRF1060LCT	SR1060LD1	SR1060LM1	Unit
Typical thermal resistance ³⁾	R _{θjc}	2.5	4.5	2.5	2.5	°C/W

3.Thermal resistance from junction to case,Total device

AVAILABLE PACK INFORMATION

Product code	Pack	Carton Size L×W×H(mm)	Inner Box Size L×W×H(mm)	Tube Length (mm)	Inner Box Number	Tube Number Per A Inner Box	Part Number Per A Tube	Quantity(carton) (K)
SR1060LCT-TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SRF1060LCT-ITO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SR1060LD1-TO-263	Tube	565×225×170	548×151×37	538	5	20	50	5
SR1060LM1-TO-252	Tube	565×225×170	548×151×37	520	5	60	75	22.5
Product code	Pack	Carton Size L×W×H(mm)	Inner Box Size L×W×H(mm)	Reel Diameter (mm)	Inner Box Number	Reel Number Per A Inner Box	Part Number Per A Reel	Quantity(carton) (K)
SR1060LD1-TO-263	Reel	364×364×235	330×330×38	φ330	5	1	800	4
SR1060LM1-TO-252	Reel	364×364×235	346×346×23	φ330	8	1	2500	20

FIG.1-FORWARD CURRENT DERATING CURVE

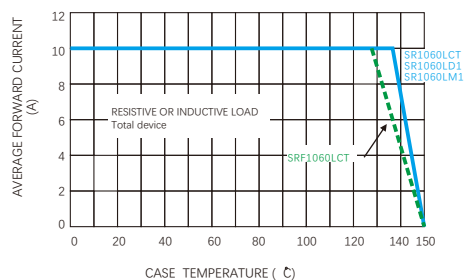


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

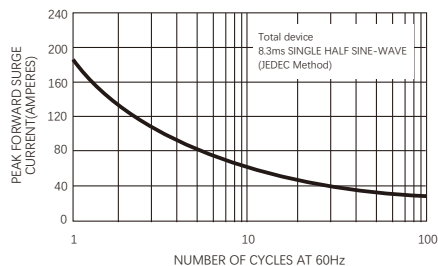


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

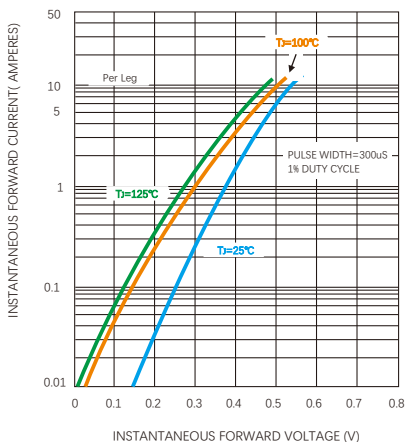


FIG.4-TYPICAL REVERSE CHARACTERISTICS

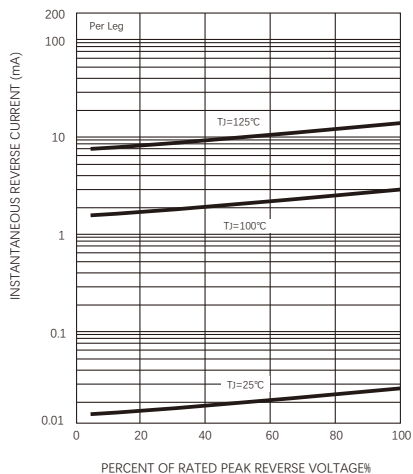
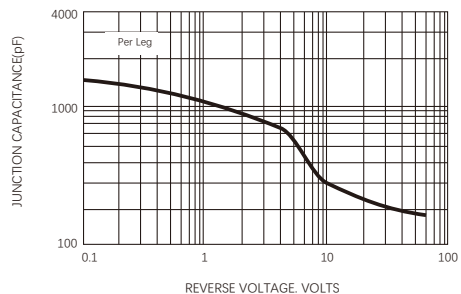


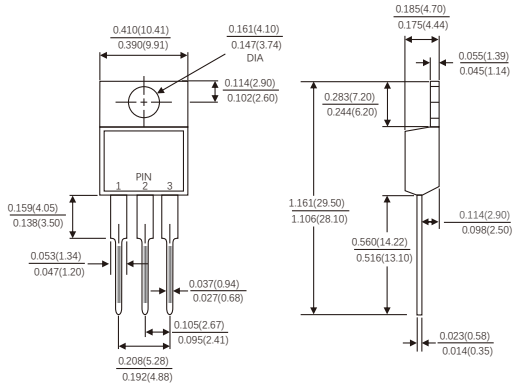
FIG.5-TYPICAL JUNCTION CAPACITANCE



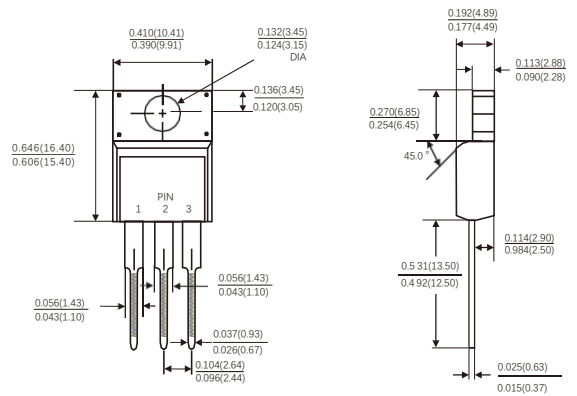
PACKAGE OUTLINE DIMENSIONS

Dimensions in inches and (millimeters)

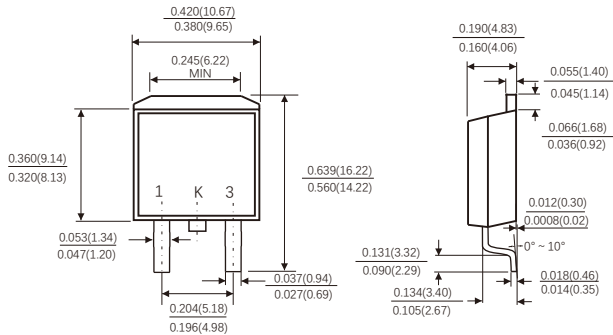
TO-220AB



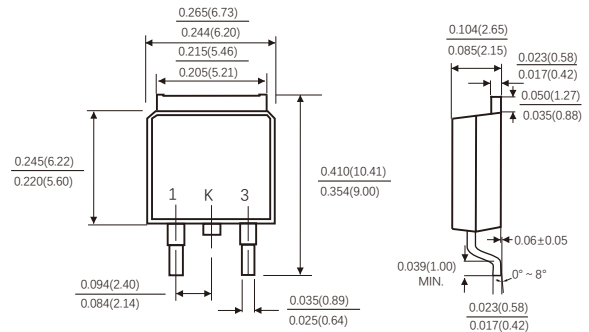
ITO-220AB



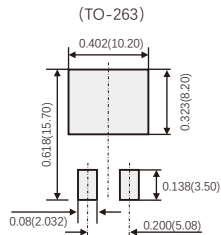
TO-263



TO-252

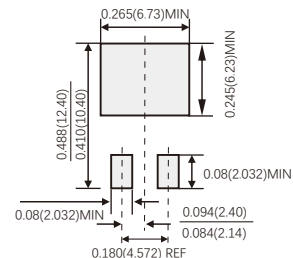


Suggested Pad Layout



(设计者可参考推荐值根据焊接工艺要求自行确定适合的焊盘尺寸)
(Designers can refer to the recommended values according to the manufacturing process requirements to determine the appropriate pad size)

Suggested Pad Layout (TO-252)



(设计者可参考推荐值根据焊接工艺要求自行确定适合的焊盘尺寸)
(Designers can refer to the recommended values according to the manufacturing process requirements to determine the appropriate pad size)

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