

FEATURES

- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability Ultra 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-263,252 package)
- Solder bath temperature 275°C maximum,10s,per JESD22-B10 (for TO-220AB and ITO-220AB package)
- Component in accordance to RoHS 2011/65/EU

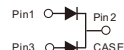


RoHS
COMPLIANT

TO-220AB
SR1080SLCT



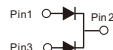
1 2 3



ITO-220AB
SRF1080SLCT



1 2 3



TO-252
SR1080SLM1



TO-263
SR1080SLD1



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	
IF(AV)	2×5A
VRRM	80V
IFSM	150A
VF at IF=5.0A(25°C)	0.54V
IR	10 μ A
TJ(MAX)	150°C
Package	TO-220AB, ITO-220AB, TO-263, TO-252
Diode variations	Common cathode

Parameter	Symbol	SR1080SLCT,SRF1080SLCT,SR1080SLD1,SR1080SLM1	Unit
Maximum repetitive peak reverse voltage	VRRM	80	V
Maximum average forward rectified current (see fig.1)	Per leg	5.0	A
	Total device	10.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	IFSM	150	A
Peak repetitive reverse current per diode at tp=2 μ s 1KHz	IRRM	2.0	A
Operating junction and Storage temperature range	TJ ,Tstg	-55 to+150	°C
Isolation voltage (ITO-220AB only) from terminals to heatsink t=1 min	VAC	1500	V

RATINGS AND CHARACTERISTIC OF SR1080SLCT,SRF1080SLCT,SR1080SLD1,SR1080SLM1

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	Per Leg If=5.0A	TA=25°C	VF 1)	0.52	0.58	V
		TA=100°C		0.48	—	
		TA=125°C		0.46	—	
	Per Leg If=3.0A	TA=25°C		0.47	—	
		TA=100°C		0.41	—	
		TA=125°C		0.39	—	
Reverse current	VR=80V	TA=25°C	IR 2)	10	50	μ A
		TA=100°C		2	—	mA
		TA=125°C		7	—	
Typical junction capacitance	4V, 1MHz		CJ	420		pF

Notes: 1.Pulse test: 300 μ s pulse width,1% duty cycle
2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS (TA=25°C Unless otherwise noted)

Parameter	Symbol	SR1080SLCT	SRF1080SLCT	SR1080SLD1	SR1080SLM1	Unit
Typical thermal resistance 3)	RθJC	2.5	4.5	2.5	2.5	℃/W

3.Thermal resistance from junction to case

AVAILABALE PACK INFORMATION

Product code	Package	Box Size L×W×H(mm)	Quantity (pcs/box)	Carton SizeL×W×H(mm)	Quantity (box/carton)
SR1080SLCT-TO-220AB	P/T	558×148×38	1000	565×225×170	5
SRF1080SLCT-ITO-220AB	P/T	558×148×38	1000	565×225×170	5
SR1080SLD1-TO-263	P/T	558×148×38	1000	565×225×170	5
SR1080SLM1-TO-252	P/T	558×148×38	4000	565×225×170	5

RATINGS AND CHARACTERISTIC OF SR1080SLCT,SRF1080SLCT,SR1080SLD1,SR1080SLM1

FIG.1-FORWARD CURRENT DERATING CURVE

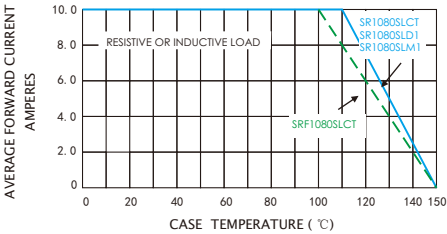


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

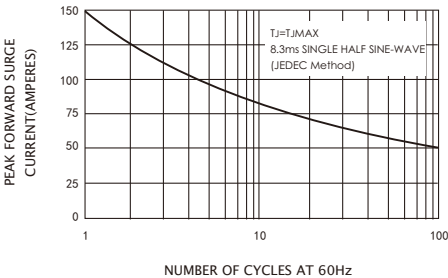


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

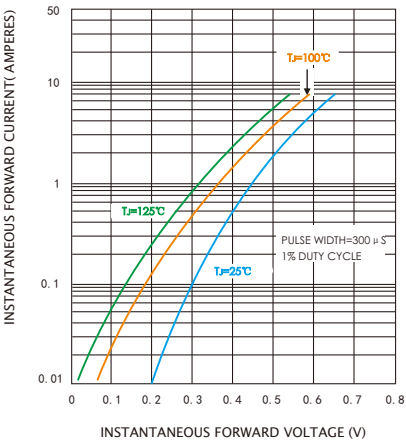


FIG.4-TYPICAL REVERSE CHARACTERISTICS

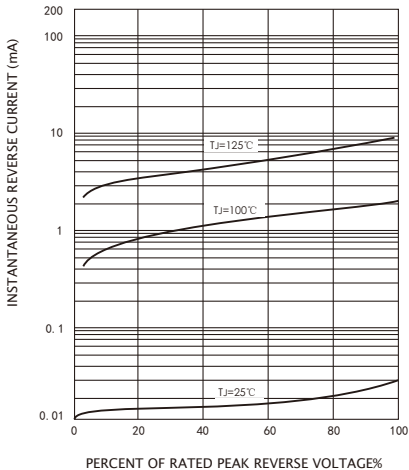
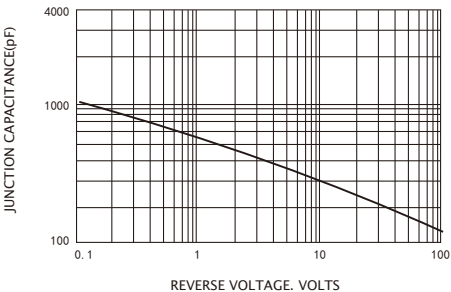


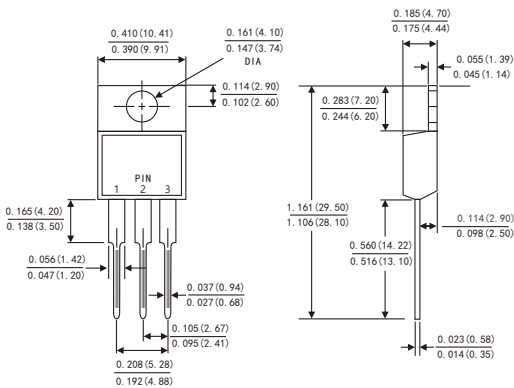
FIG.5-TYPICAL JUNCTION CAPACITANCE



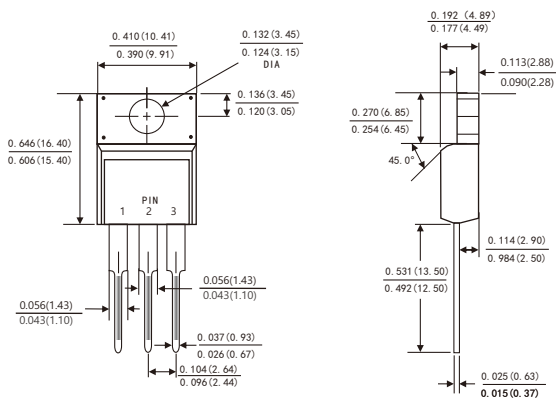
PACKAGE OUTLINE DIMENSIONS

Dimensions in inches and (millimeters)

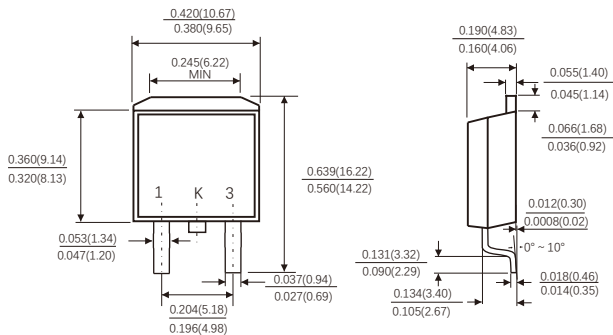
TO-220AB



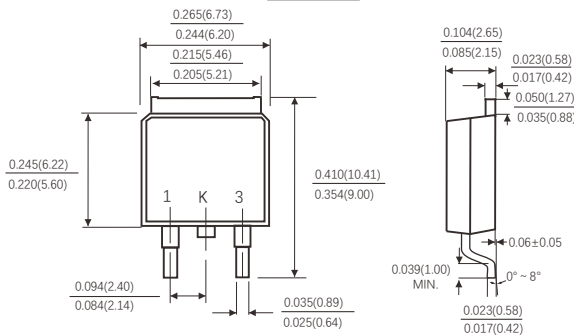
ITO-220AB



TO-263

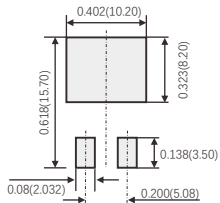


TO-252



Suggested Pad Layout

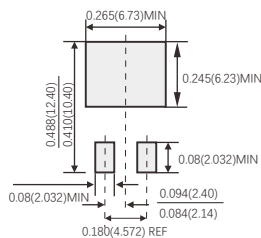
(TO-263)



(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.)