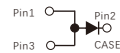
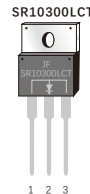


FEATURES

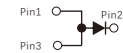
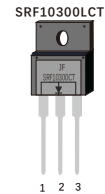
- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High forward surge capability
- High frequency operation
- Meets MSL Level 1, per J-STD-020,LF MAX peak of 260°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 2015/863/EU



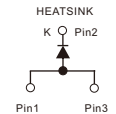
TO-220AB



ITO-220AB



TO-263
SR10300LD3



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)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	300	V
Maximum average forward rectified current (see fig.1)	I _{F(AV)}	10.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I _{FSM}	150	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

PRIMARY CHARACTERISTICS	
I _{F(AV)}	10A
V _{RRM}	300V
I _{FSM}	150A
V _F at I _F =10.0A(125°C)	0.70V
I _R	0.1 μA
T _J (MAX)	150°C
Package	TO-220AB, ITO-220AB, TO-263
Diode variations	Common cathode

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I _F =10A	T _J =25°C	V _F ¹⁾	-	0.90	V
		T _J =125°C		0.70	0.80	
	I _F =6A	T _J =25°C		0.76	-	
		T _J =125°C		0.66	-	
Reverse current	V _R =300V	T _J =25°C	I _R ²⁾	-	5.0	μA
		T _J =125°C		-	1.0	mA
Typical junction capacitance	4V,1MHz		C _J	175		pF

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

2.Pulse test: pulse width ≤ 40ms

 THERMAL CHARACTERISTICS (T_A=25°C Unless otherwise noted)

Parameter	Symbol	SR10300LCT	SRF10300LCT	SR10300LD3	Unit
Typical thermal resistance ³⁾	R _{θJC}	2.5	4.5	2.5	°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)
SR10300LCT-TO-220AB	P/T	558×148×38	1000	565×225×170	5
SRF10300LCT-ITO-220AB	P/T	558×148×38	1000	565×225×170	5
SR10300LD3-TO-263	P/T	558×148×38	1000	565×225×170	5

FIG.1-FORWARD CURRENT DERATING CURVE

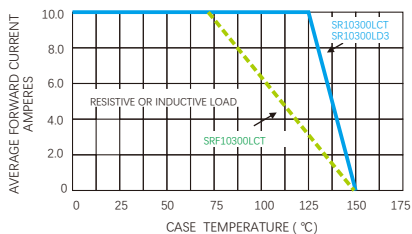


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

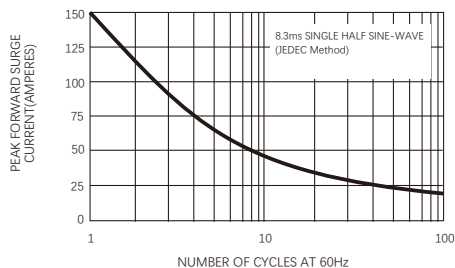


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

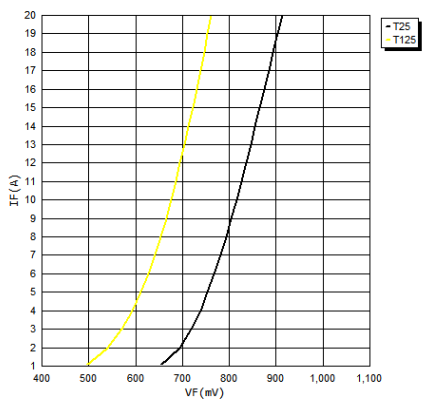


FIG.4-TYPICAL REVERSE CHARACTERISTICS

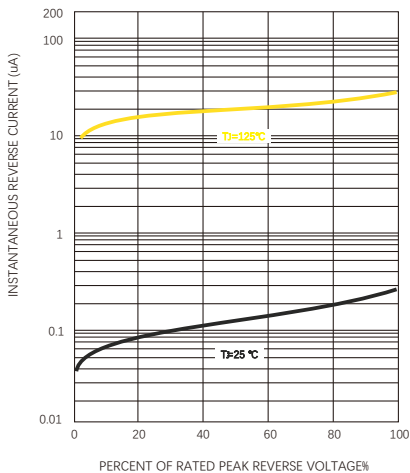
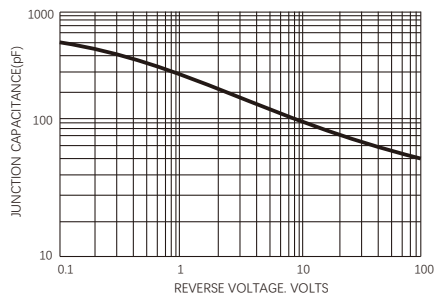
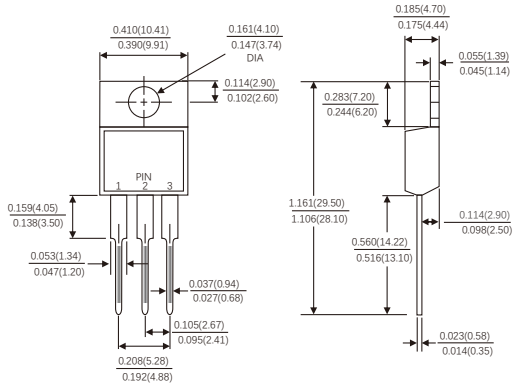


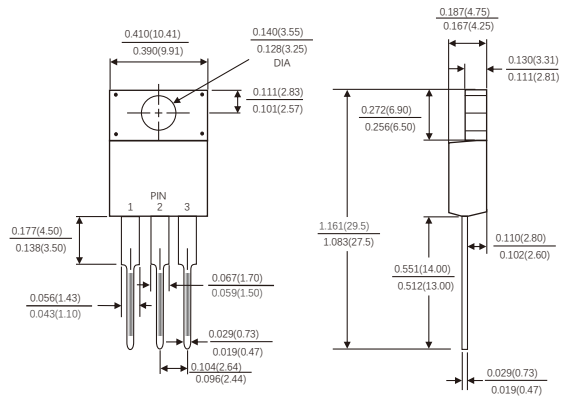
FIG.5-TYPICAL JUNCTION CAPACITANCE



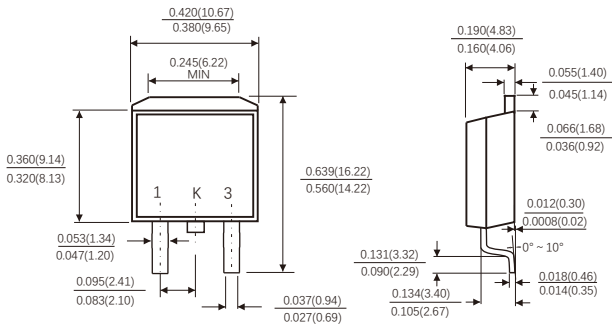
TO-220AB



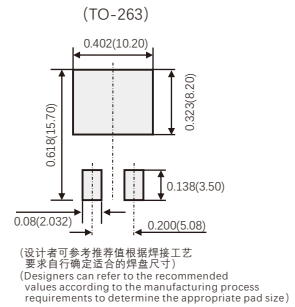
ITO-220AB



TO-263



Suggested Pad Layout



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