

FEATURES

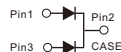
- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High forward surge capability
- High frequency operation
- Meets MSL Level 1, per J-STD-020, LF MAX peak of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



1 2 3



ITO-220AB



1 2 3



TO-263
SR6045D1



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}	45	V
Maximum average forward rectified current (see fig.1)	$I_F(AV)$	30.0	A
		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
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

$I_F(AV)$	2×30A
V_{SRM}	45V
I_{FSM}	300A
VF at $I_F=30.0A$,Per leg	0.56V
I_r	100 μ A
$T_J(MAX)$	150°C
Package	TO-220AB, ITO-220AB, TO-263
Diode variations	Common cathode

RATINGS AND CHARACTERISTIC OF SR6045CT,SRF6045CT,SR6045D1

ELECTRICAL CHARACTERISTCS (TA=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	Per leg If=30.0A	TA=25℃	VF 1)	0. 56	0. 60	V
		TA=100℃		0. 52	—	
		TA=125℃		0. 50	—	
	Per leg If=10.0A	TA=25℃		0. 40	—	
		TA=100℃		0. 36	—	
		TA=125℃		0. 35	—	
Reverse current	VR=45V	TA=25℃	IR 2)	100	200	μ A
		TA=100℃		8	15	mA
		TA=125℃		20	50	
Typical junction capacitance	4V, 1MHz		CJ	930		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-220AB	ITO-220AB	TO-263	Unit
Typical thermal resistance 3)	RθJC	2. 5	4. 5	2. 5	℃/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)
SR6045CT-TO-220AB	P/T	558×148×38	1000	565×225×170	5
SRF6045CT-ITO-220AB	P/T	558×148×38	1000	565×225×170	5
SR6045D1-TO-263	P/T	558×148×38	1000	565×225×170	5

RATINGS AND CHARACTERISTIC OF SR6045CT,SRF6045CT,SR6045D1

FIG.1-FORWARD CURRENT DERATING CURVE

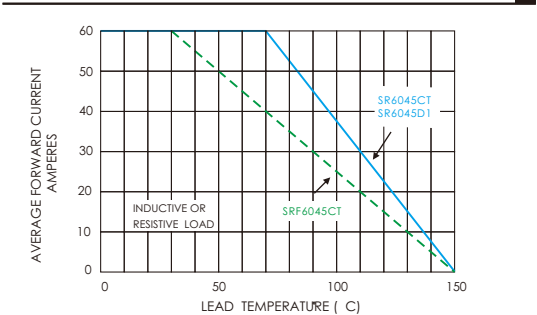


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

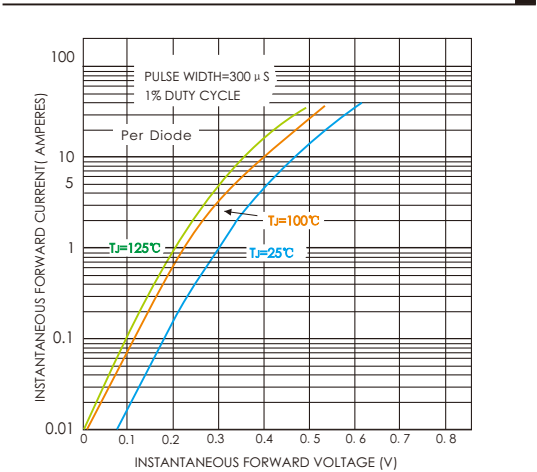


FIG.5-TYPICAL JUNCTION CAPACITANCE

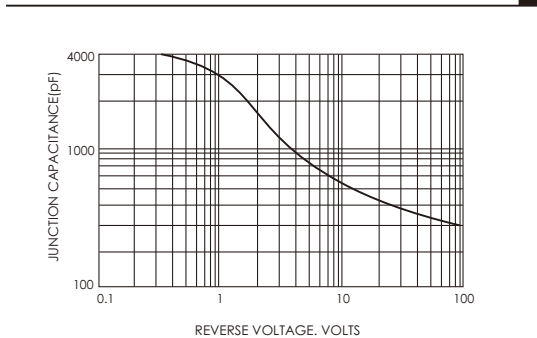


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

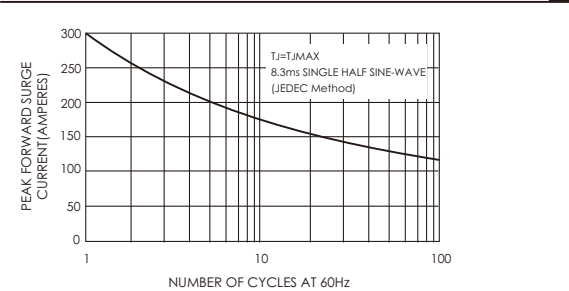
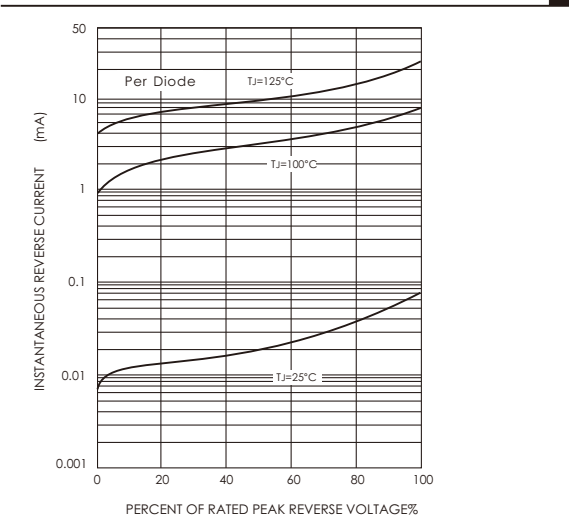
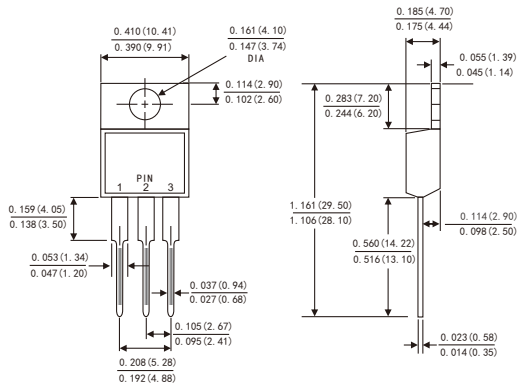


FIG.4-TYPICAL REVERSE CHARACTERISTICS

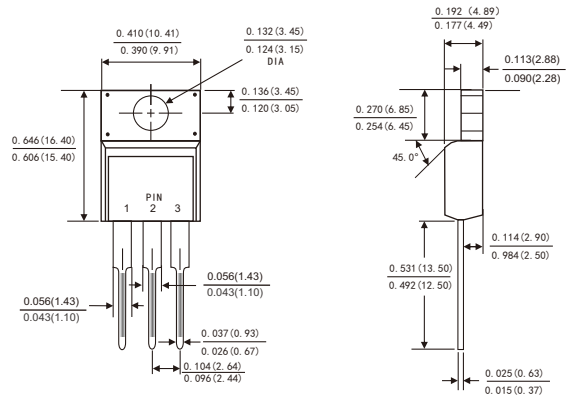


PACKAGE OUTLINE DIMENSIONS

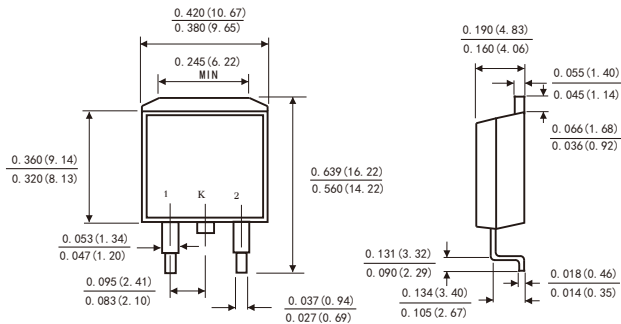
TO-220AB



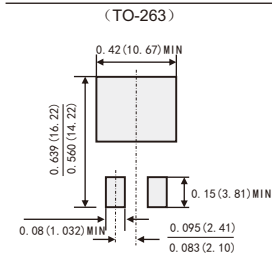
ITO-220AB



TO-263



Suggested Pad Layout



Dimensions in inches and (millimeters)