

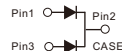
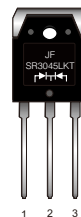
FEATURES

- 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
- Solder bath temperature 275°C maximum, 10s, per JESD22-B106
- Component in accordance to RoHS 2015/863/EU



TO-3P

SR3045LKT



MECHANICAL DATA

- Case: JEDEC TO-3P
- 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)	Per leg	15	A
	Total device	30	
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 tp=2 μs 1KHz	I _{RRM}	0.5	A
Operating junction and Storage temperature range	T _J ,T _{stg}	-55 to +150	°C

PRIMARY CHARACTERISTICS	
I _{F(AV)}	2×15A
V _{RRM}	45V
I _{FSM}	300A
V _F at I _F =15A,125°C, Per leg	0.41V
I _R	200 μA
T _{J(MAX)}	150°C
Package	TO-3P
Diode variations	Common cathode

RATINGS AND CHARACTERISTIC OF SR3045LKT

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	Per leg IF=15.0A	T _A =25°C	V _F ¹⁾	0.49	0.52	V
		T _A =100°C		0.43	—	
		T _A =125°C		0.41	—	
	Per leg IF=10.0A	T _A =25°C		0.43	0.45	
		T _A =100°C		0.37	—	
		T _A =125°C		0.35	—	
Reverse current	VR=45V	T _A =25°C	I _R ²⁾	100	200	μA
		T _A =100°C		8	15	mA
		T _A =125°C		20	50	
Typical junction capacitance	4V, 1MHz		C _J	570		pF

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

2.Pulse test: pulse width ≤ 40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-3P	Unit
Typical thermal resistance ³⁾	R _{θJC}	1.5	°C/W

3.Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC OF SR3045LKT

FIG.1-FORWARD CURRENT DERATING CURVE

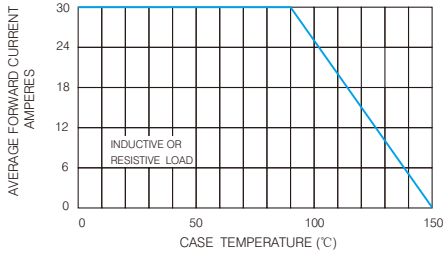


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

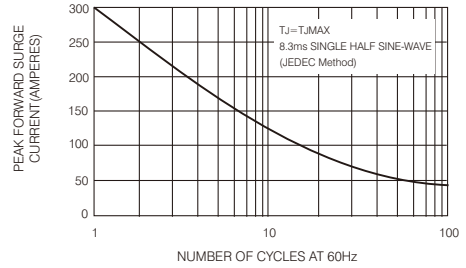


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

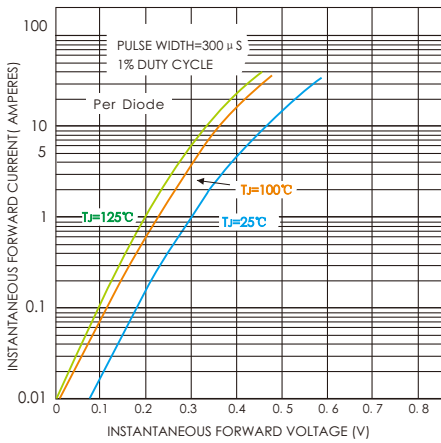


FIG.4-TYPICAL REVERSE CHARACTERISTICS

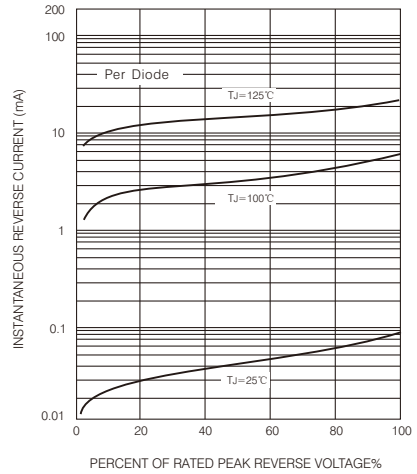
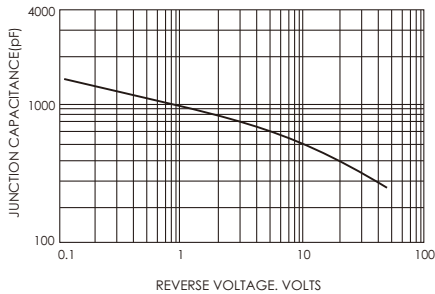
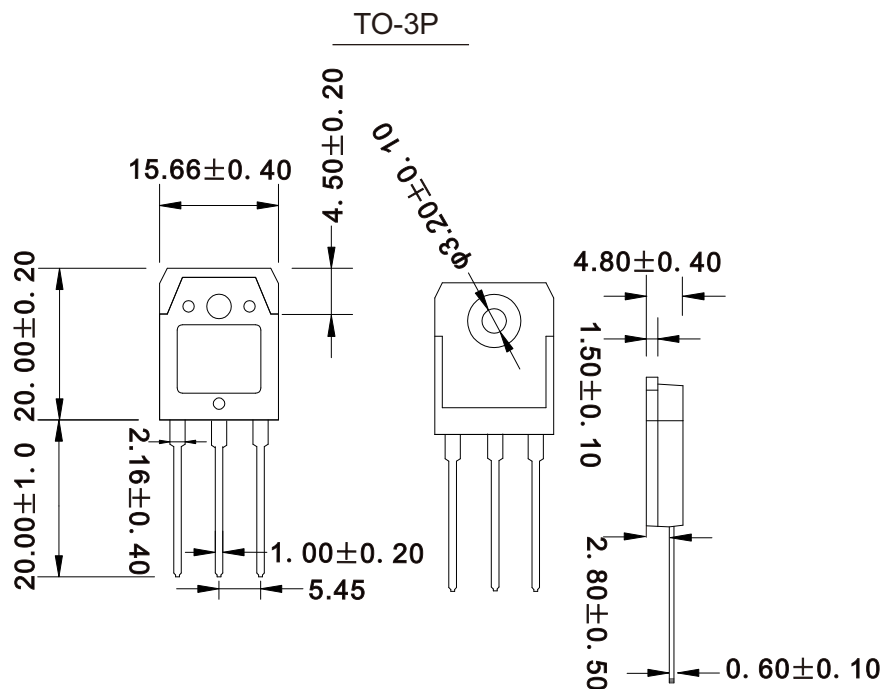


FIG.5-TYPICAL JUNCTION CAPACITANCE



PACKAGE OUTLINE DIMENSIONS



Dimensions in millimeters

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