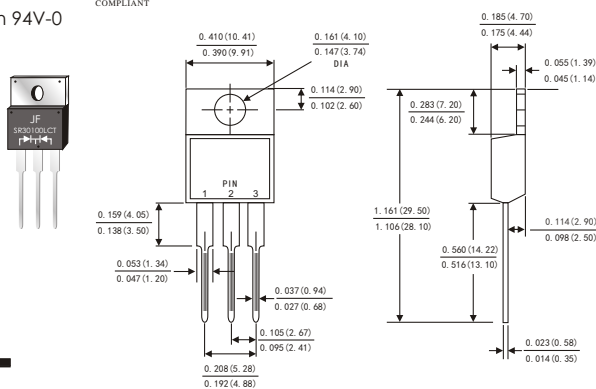


FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU and WEEE 2012/19/EU



TO-220AB



MECHANICAL DATA

- Case: JEDEC TO-220AB molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any

Dimensions in inches and (millimeters)

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	
$I_F(AV)$	30.0 A
V_{RRM}	100V
I_{FSM}	250A
VF at $I_F=15.0A$ Per Leg	0.63V
T_{JMAX}	150°C

Parameter	Symbol	SR30100LCT	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current (see fig.1)	Per leg	15.0	A
	Total device	30.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	250	A
Operating junction temperature range	T_J	-55 to+150	°C
Storage temperature range	T_{stg}	-55 to+150	°C

RATINGS AND CHARACTERISTIC OF SR30100LCT

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	Per leg IF=15.0A	$T_A=25^{\circ}\text{C}$	V_F ¹⁾	0.69	0.71	V
		$T_A=100^{\circ}\text{C}$		0.67	-	
		$T_A=125^{\circ}\text{C}$		0.64	-	
	Per leg IF=5.0A	$T_A=25^{\circ}\text{C}$		0.50	0.52	
		$T_A=100^{\circ}\text{C}$		0.49	-	
		$T_A=125^{\circ}\text{C}$		0.48	-	
Reverse current	VR=100V	$T_A=25^{\circ}\text{C}$	I_R ²⁾	20	50	μA
		$T_A=100^{\circ}\text{C}$		2	5	mA
		$T_A=125^{\circ}\text{C}$		8	20	
Typical junction capacitance	4V, 1MHz		CJ	570		pF

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

2.Pulse test: pulse width \leq 40ms

THERMAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Parameter	Symbol	SR30100LCT	Unit
Typical thermal resistance ³⁾	$R_{\theta\text{JC}}$	2.5	$^{\circ}\text{C}/\text{W}$

3.Thermal resistance from junction to case

AVAILABLE PACK INFORMATION

Product code	Package	Box Size L×W×H(mm)	Quantity (pcs/box)	Carton SizeL×W×H(mm)	Quantity (box/carton)
SR30100LCT-TO-220AB	P/T	558×148×38	1000	565×225×170	5

RATINGS AND CHARACTERISTIC OF SR30100LCT

FIG.1-FORWARD CURRENT DERATING CURVE

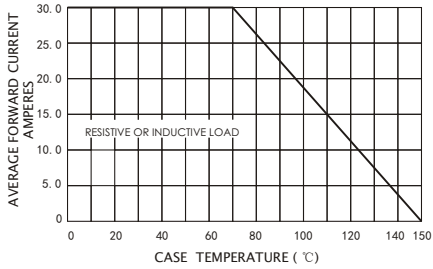


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

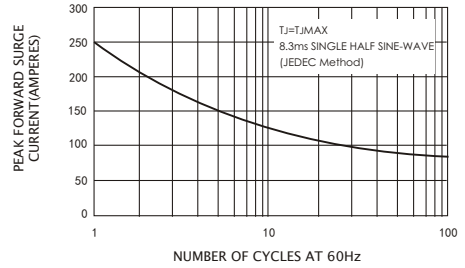


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

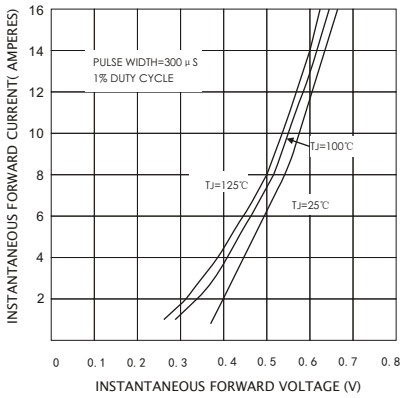


FIG.4-TYPICAL REVERSE CHARACTERISTICS

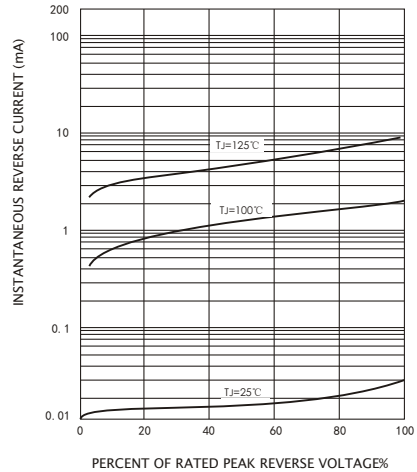


FIG.5-TYPICAL JUNCTION CAPACITANCE

