

### TO-247AB

## 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
- Component in accordance to RoHS 2011/65/EU

## MECHANICAL DATA

- Case: JEDEC TO-247AB
- 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

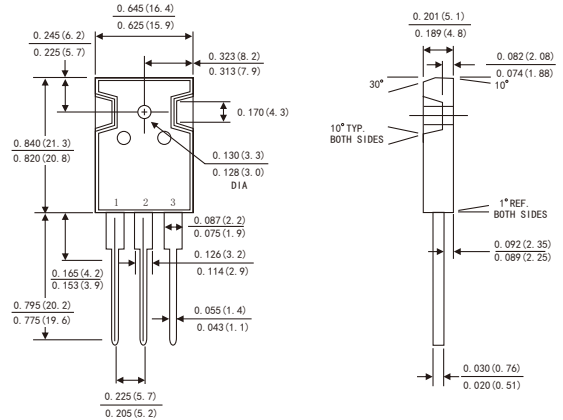
## TYPICAL APPLICATIONS

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	$V_{RRM}$	100	V
Maximum average forward rectified current (see fig.1)	Per leg	15.0	A
	Total device	30.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	250	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



Dimensions in inches and (millimeters)

PRIMARY CHARACTERISTICS	
$I_F(AV)$	2×15A
$V_{RRM}$	100V
$I_{FSM}$	250A
VF at $I_F=15.0A$ ,Per leg	0.75V
$I_r$	2μA
$T_J(MAX)$	150°C
Package	TO-247AB
Diode variations	Common cathode

## RATINGS AND CHARACTERISTIC CURVES SR30100PT

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	Per leg $I_F=15.0\text{A}$	$T_A=25^{\circ}\text{C}$	$V_F$ <sup>1)</sup>	0.75	0.85	V
		$T_A=100^{\circ}\text{C}$		0.65	-	
		$T_A=125^{\circ}\text{C}$		0.61	-	
	Per leg $I_F=10.0\text{A}$	$T_A=25^{\circ}\text{C}$		0.71	0.81	
		$T_A=100^{\circ}\text{C}$		0.61	-	
		$T_A=125^{\circ}\text{C}$		0.57	-	
Reverse current	$V_R=100\text{V}$	$T_A=25^{\circ}\text{C}$	$I_R$ <sup>2)</sup>	2	5	$\mu\text{A}$
		$T_A=100^{\circ}\text{C}$		-	2	mA
		$T_A=125^{\circ}\text{C}$		-	5	
Typical junction capacitance	4V,1MHz		$C_J$	367		pF

Notes: 1.Pulse test: 300  $\mu\text{s}$  pulse width,1% duty cycle

2.Pulse test: pulse width $\leq$ 40ms

### THERMAL CHARACTERISTICS

Parameter	Symbol	SR30100PT	Unit
Typical thermal resistance <sup>3)</sup>	$R_{\theta JC}$	2.0	$^{\circ}\text{C}/\text{W}$

3.Thermal resistance from junction to case

# RATINGS AND CHARACTERISTIC CURVES SR30100PT

FIG.1-FORWARD CURRENT DERATING CURVE

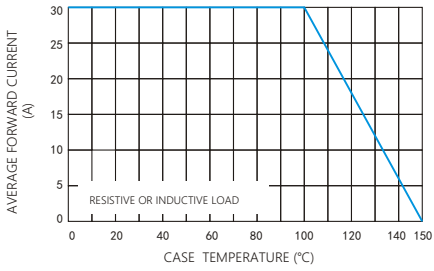


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

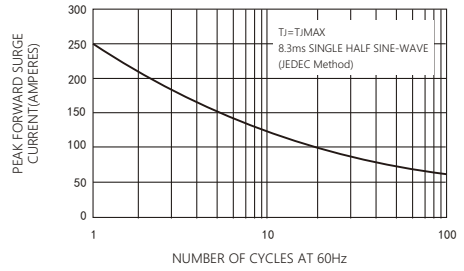


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

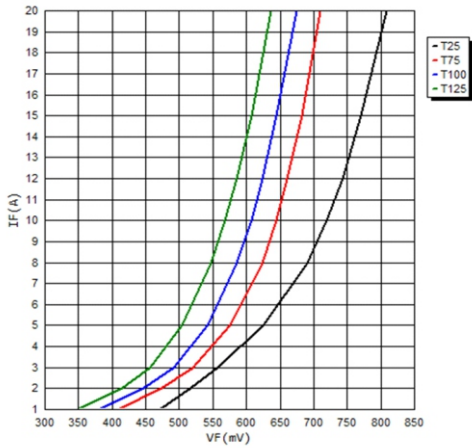


FIG.4-TYPICAL REVERSE CHARACTERISTICS

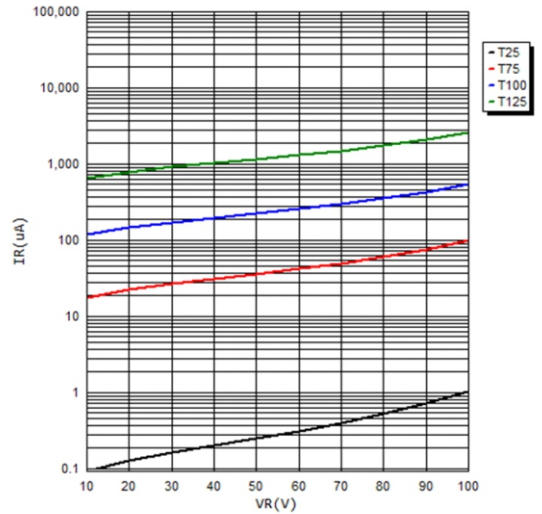
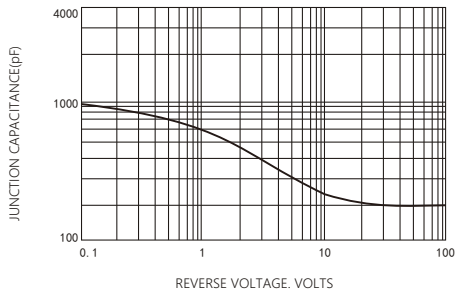


FIG.5-TYPICAL JUNCTION CAPACITANCE



## Friendship Reminder

■ JiNan JingHeng (hereinafter referred to as JH) reserves the right to make changes to this document and its products and specifications at anytime without notice.

济南晶恒（以下简称 JH）保留未经通知，变更本文件和与本文件相关的产品及规格的权利。

■ Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

使用方应在使用、采购本产品之前获取并确认产品信息和规格书的最新版本。

■ JH makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does JH assume any liability for application assistance or customer product design.

JH 对其产品用于某特定用途的适用性，既不做任何保证、说明或担保，也不承担任何应用协助或使用方设计的法定责任。

■ JH does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

JH 不保证或承担任何责任，其产品被采购使用于任何非预期或授权的应用，

■ No license is granted by implication or otherwise under any intellectual property rights of JH.

此规格书属于 JH 的知识产权,没有经过我司授权不得抄袭。

■ JH's products are not authorized for use as critical components in life support devices or systems without express written approval of JH.

没有 JH 的书面授权，JH 的产品不能在生命支撑设备或系统里作为关键零件使用。