

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
- Very low profile-typical height of 1.1mm
- Ideal for automated placement
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

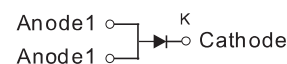
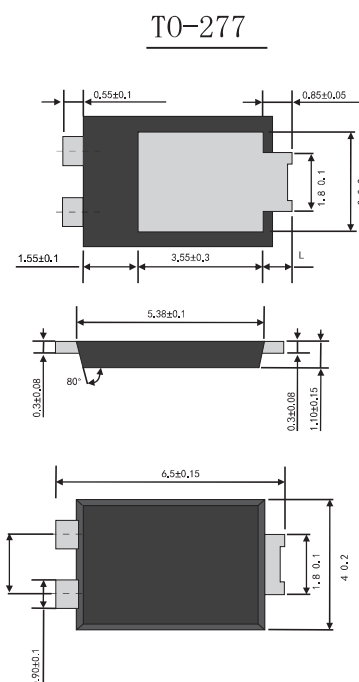


MECHANICAL DATA

- Case: TO-277 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Weight: 0.092 grams(approx)

TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

(Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	V
Maximum average forward rectified current	$I_{F(AV)}$	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 SP30200

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	$I_F=30.0\text{A}$	$T_A=25^{\circ}\text{C}$	V_F ¹⁾	0.88	0.95	V
		$T_A=125^{\circ}\text{C}$		0.74	-	
	$I_F=5.0\text{A}$	$T_A=25^{\circ}\text{C}$		0.70	-	
		$T_A=125^{\circ}\text{C}$		0.55	-	
Reverse current	$V_R=200\text{V}$	$T_A=25^{\circ}\text{C}$	I_R ²⁾	5	20	μA
		$T_A=125^{\circ}\text{C}$		-	1.5	mA
Typical junction capacitance	4V,1MHz		C_J	387		pF

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

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

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-277	Unit
Typical thermal resistance ³⁾	$R_{\theta JA}$	60.0	$^{\circ}\text{C/W}$
	$R_{\theta JL}$	3.0	

3 Units mounted on recommended PCB 1 oz. Pad layout

AVAILABALE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
SP30200-TO-277	T/R	$\phi 330$	5000	338×338×40	2	365×365×360	7

RATINGS AND CHARACTERISTIC OF SP30200

FIG.1-FORWARD CURRENT DERATING CURVE

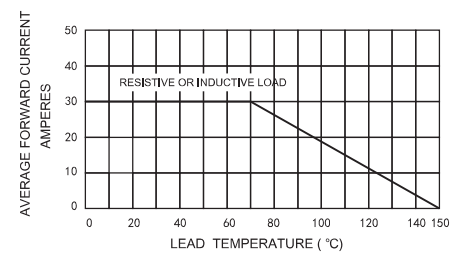


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

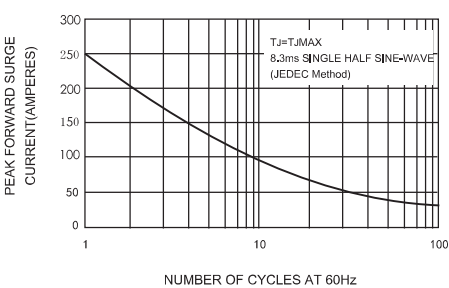


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

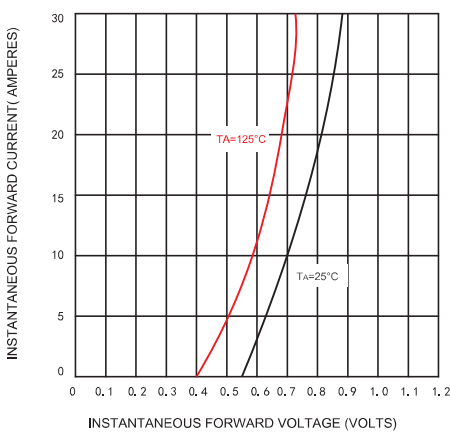


FIG.4-TYPICAL REVERSE CHARACTERISTICS

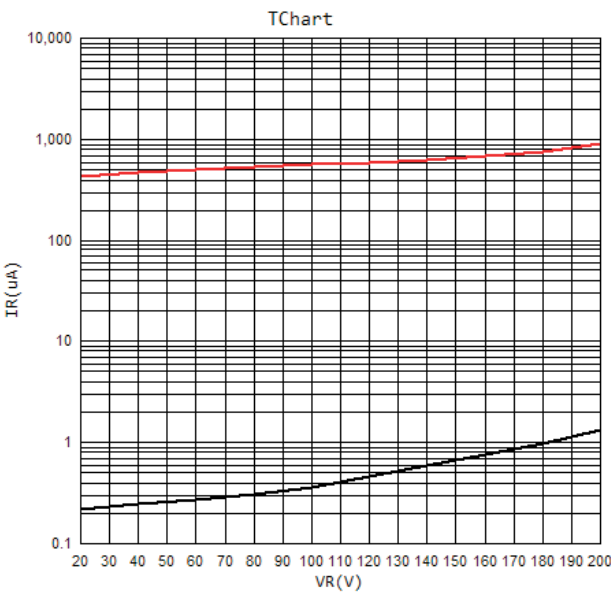


FIG.5-TYPICAL JUNCTION CAPACITANCE

