

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



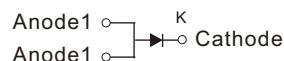
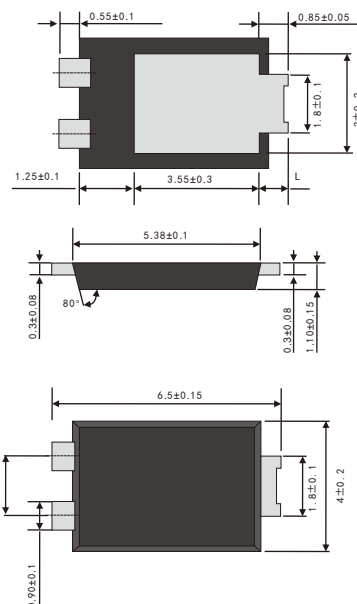
MECHANICAL DATA

- 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

TO-277



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}	60	V
Maximum average forward rectified current	$I_{F(AV)}$	20.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	200	A
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{stg}	-55 to +150	°C

RATINGS AND CHARACTERISTIC OF SP20U60L

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	If=20.0A	TA=25°C	VF 1)	0.55	0.60	V
		TA=100°C		0.51	—	
		TA=125°C		0.49	—	
	If=5.0A	TA=25°C		0.43	—	
		TA=100°C		0.35	—	
		TA=125°C		0.33	—	
Reverse current	VR=60V	TA=25°C	IR 2)	60	150	μ A
		TA=100°C		5	10	mA
		TA=125°C		15	30	
Typical junction capacitance	4V, 1MHz		CJ	2000		pF

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle
2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	TO-277	Unit
Typical thermal resistance 3)	RθJA	60.0	°C/W
	RθJL	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)
SP20U60L-TO-277	T/R	Φ 300	5000	338*338*40	2	365*365*360	7

RATINGS AND CHARACTERISTIC OF SP20U60L

FIG.1-FORWARD CURRENT DERATING CURVE

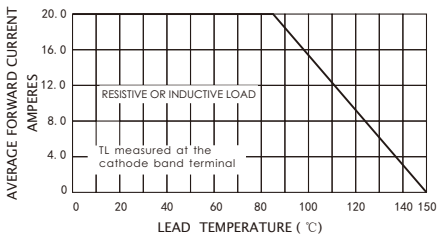


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

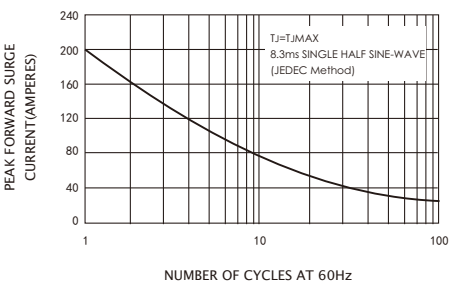


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

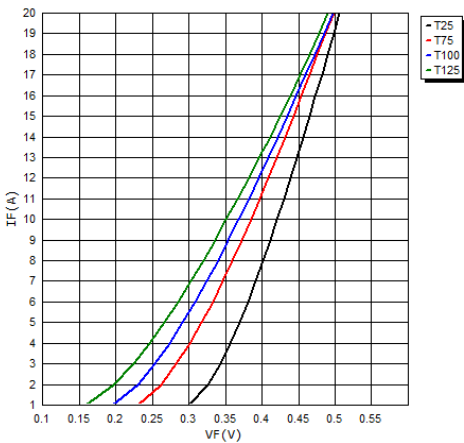


FIG.4-TYPICAL REVERSE CHARACTERISTICS

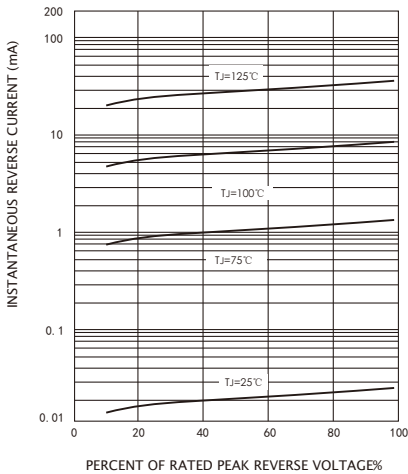


FIG.5-TYPICAL JUNCTION CAPACITANCE

