

### 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 2015/863/EU



### MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012ounce, 0.33 gram

### TYPICAL APPLICATIONS

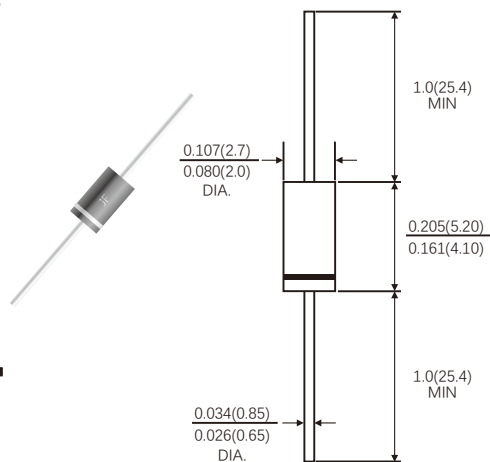
For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

### MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	60	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	I <sub>F(AV)</sub>	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I <sub>FSM</sub>	40	A
Operating junction temperature range	T <sub>j</sub>	-55 to+150	°C
Storage temperature range	T <sub>stg</sub>	-55 to+150	°C

### DO-41



Dimensions in inches and (millimeters)

PRIMARY CHARACTERISTICS	
I <sub>F(AV)</sub>	1.0A
V <sub>RRM</sub>	60V
I <sub>FSM</sub>	40A
V <sub>F</sub> at I <sub>F</sub> =1.0A	0.45V
T <sub>JMAX</sub>	150°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instantaneous forward voltage	I <sub>F</sub> =1.0A	T <sub>J</sub> =25°C	V <sub>F</sub> <sup>1)</sup>	0.53	0.55	V
		T <sub>J</sub> =100°C		0.47	0.49	
		T <sub>J</sub> =125°C		0.45	0.47	
Reverse current	V <sub>R</sub> =60V	T <sub>J</sub> =25°C	I <sub>R</sub> <sup>2)</sup>	60	150	μA
		T <sub>J</sub> =100°C		5	10	mA
		T <sub>J</sub> =125°C		15	30	
Typical junction capacitance	4V, 1MHz		C <sub>J</sub>	110		pF

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

2.Pulse test: pulse width ≤ 40ms

## THERMAL CHARACTERISTICS

Parameter	Symbol	SR160L	Unit
Typical thermal resistance <sup>3)</sup>	R <sub>θJA</sub>	50.0	°C/W
	R <sub>θJL</sub>	15.0	

3.Thermal resistance from junction to lead vertical P.C.B. mounted , 0.375"(9.5mm)lead length

## AVAILABLE PACK INFORMATION

Product code	Pack	Box Size L*W*H(mm)	Quantity(pcs/box)	Carton SizeL*W*H(mm)	Quantity(box/carton)
SR160L-DO-41	B/P	190*80*21	1000	433*203*230	50
SR160L-DO-41	T/B	264*74*135	5000	400*267*286	50

# RATINGS AND CHARACTERISTIC OF SR160L

FIG.1-FORWARD CURRENT DERATING CURVE

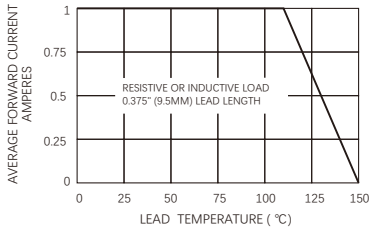


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

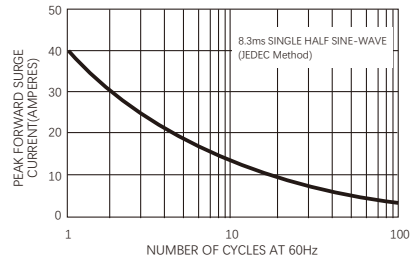


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

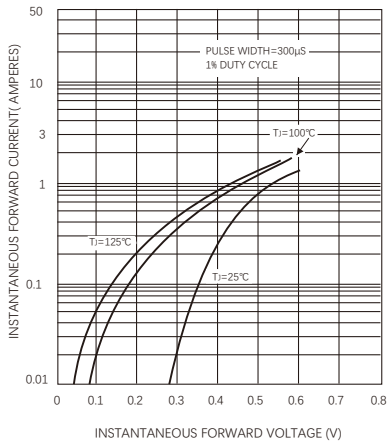


FIG.4-TYPICAL REVERSE CHARACTERISTICS

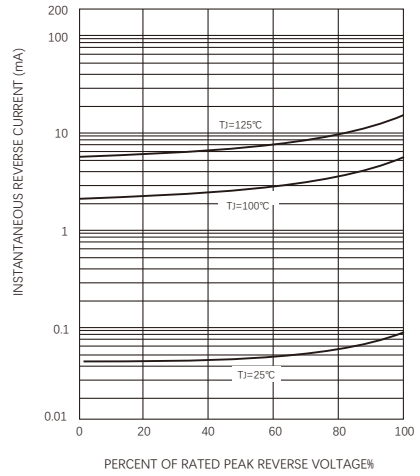
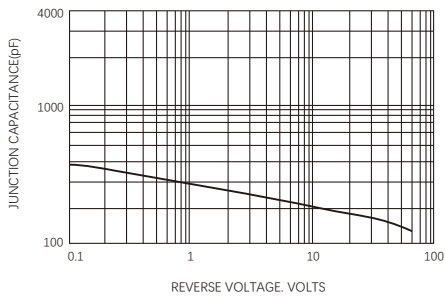


FIG.5-TYPICAL JUNCTION CAPACITANCE



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