

### 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-201AD molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 0.041ounce, 1.15 grams

### TYPICAL APPLICATIONS

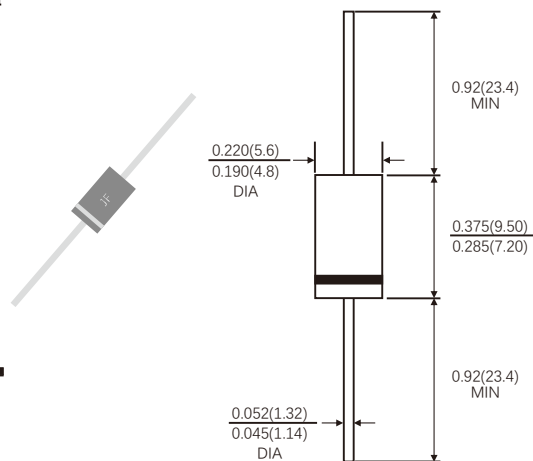
For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

### MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	80	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	120	A
Operating junction temperature range	$T_J$	-55 to +150	°C
Storage temperature range	$T_{STG}$	-55 to +150	°C

### DO-201AD



Dimensions in inches and (millimeters)

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	5.0A
$V_{RRM}$	80V
$I_{FSM}$	120A
$V_F$ at $I_F=5.0A, 125^\circ C$	0.44V
$T_{JMAX}$	150°C

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

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	I <sub>F</sub> =5.0A	T <sub>J</sub> =25°C	V <sub>F</sub> 1)	0.51	0.56	V
		T <sub>J</sub> =100°C		0.46	-	
		T <sub>J</sub> =125°C		0.44	-	
	I <sub>F</sub> =2.0A	T <sub>J</sub> =25°C		0.43	-	
		T <sub>J</sub> =100°C		0.36	-	
		T <sub>J</sub> =125°C		0.33	-	
Reverse current	V <sub>R</sub> =80V	T <sub>J</sub> =25°C	I <sub>R</sub> 2)	-	20	μA
		T <sub>J</sub> =100°C		-	2.5	mA
		T <sub>J</sub> =125°C		-	12	
Typical junction capacitance	4V,1MHz		C <sub>J</sub>	850		pF

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

2.Pulse test: pulse width ≤40ms

## THERMAL CHARACTERISTICS

Parameter	Symbol	DO-201AD	Unit
Typical thermal resistance 3)	R <sub>θJA</sub>	25.0	°C/W
	R <sub>θJL</sub>	8.0	

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

## AVAILABALE PACK INFORMATION

Product code	Pack	Box Size L*W*H(mm)	Quantity(pcs/box)	Carton SizeL*W*H(mm)	Quantity(box/carton)
SR580L-DO-201AD	B/P	190*80*21	200	433*203*230	50
SR580L-DO-201AD	T/B	264*74*135	1000	400*267*286	10

FIG.1-FORWARD CURRENT DERATING CURVE

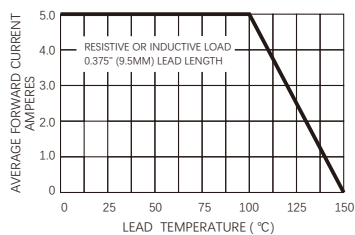


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

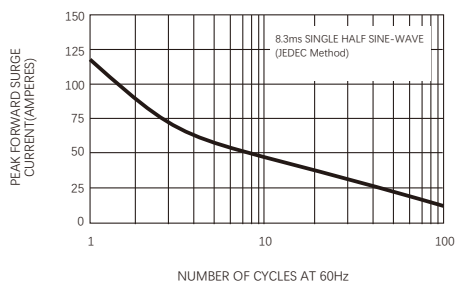


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

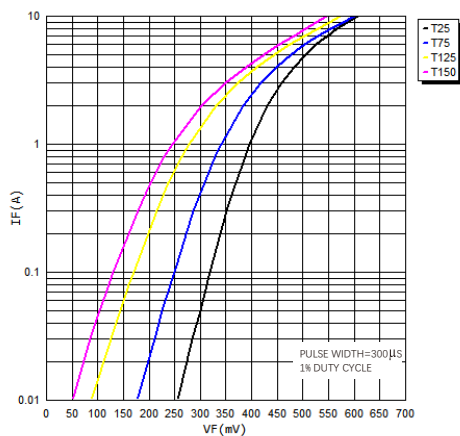


FIG.4-TYPICAL REVERSE CHARACTERISTICS

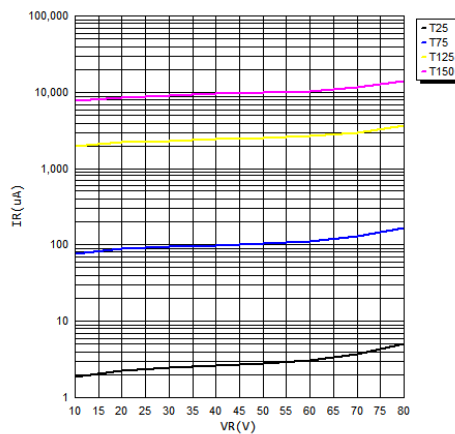
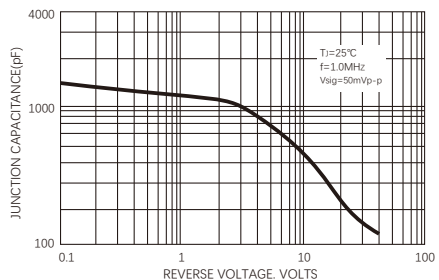


FIG.5-TYPICAL JUNCTION CAPACITANCE



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