

LOW VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 45 Volts
Forward Current - 10.0Amperes

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℃/10 seconds at terminals
- Component in accordance to RoHS 2011/65/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

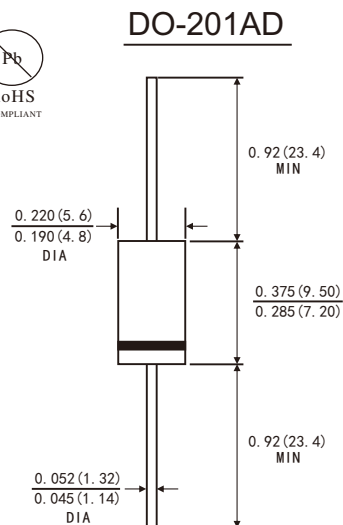
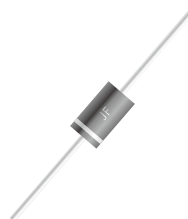
TYPICAL APPLICATIONS

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

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	45	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_F(AV)$	10.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_J)	I_{FSM}	150	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃



Dimensions in inches and (millimeters)

PRIMARY CHARACTERISTICS	
$I_F(AV)$	10.0A
V_{RRM}	45V
I_{FSM}	150A
V_F at $I_F=10.0A$	0.35V
T_{JMAX}	150℃

RATINGS AND CHARACTERISTIC OF SR1045L

ELECTRICAL CHARACTERISTCS (TA=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Typ.	Max.	Unit
Instaneous forward voltage	IF=10A	TA=25℃	VF ¹⁾	0.43	0.47	V
		TA=100℃		0.37	—	
		TA=125℃		0.35	—	
Reverse current	VR=45V	TA=25℃	IR ²⁾	100	200	μA
		TA=100℃		8	15	mA
		TA=125℃		20	50	
Typical junction capacitance	4V, 1MHz		CJ	570		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⁾	RθJA	25.0	℃/W
	RθJL	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)
SR1045L-DO-201AD	B/P	190*80*21	200	433*203*230	50
SR1045L-DO-201AD	T/B	264*74*135	1000	400*267*286	10

RATINGS AND CHARACTERISTIC OF SR1045L

FIG.1-FORWARD CURRENT DERATING CURVE

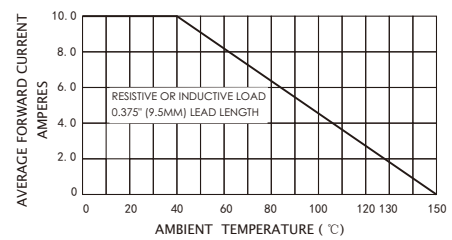


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

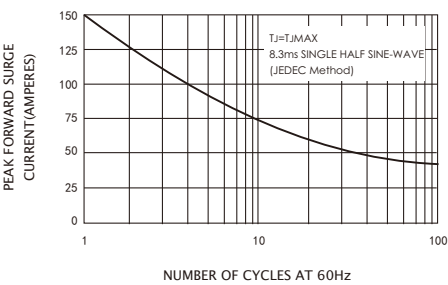


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

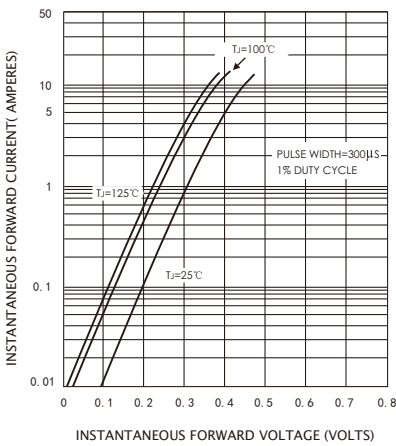


FIG.4-TYPICAL REVERSE CHARACTERISTICS

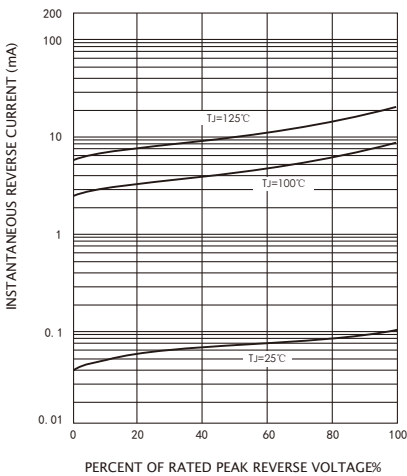


FIG.5-TYPICAL JUNCTION CAPACITANCE

