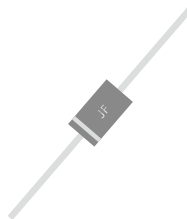


FEATURES

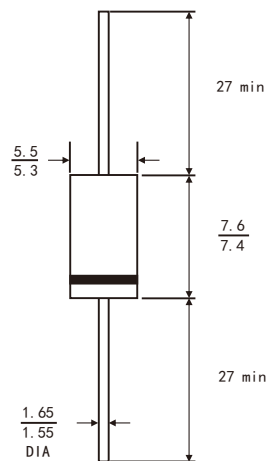
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



RoHS
COMPLIANT



R-7



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 1.55 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)

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	20.0A
V_{RRM}	100V
I_{FSM}	350A
V_F at $I_F=20.0A, 25^\circ C$	0.85V
T_{JMAX}	150°C

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{F(AV)}$	20.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	350	A
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{stg}	-55 to +150	°C

RATINGS AND CHARACTERISTIC OF SR20100

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

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instantaneous forward voltage	T _A =25°C	I _F =30.0A	V _F ¹⁾	0.84		V
		I _F =20.0A		0.79	–	
		I _F =15.0A		0.76	–	
	T _A =150°C	I _F =30.0A		0.67	–	
		I _F =20.0A		0.61	–	
		I _F =15.0A		0.58	–	
Reverse current	T _A =25°C	V _R =100V	I _R ²⁾	2.0	20	μA
	T _A =100°C			0.2	–	mA
	T _A =125°C			1.0	2.0	
Typical junction capacitance	4V,1MHz		C _J	420		pF

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

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTICS

Parameter	Symbol	SR20100	Unit
Typical thermal resistance ³⁾	R _{θJA}	10.0	°C/W
	R _{θJL}	2.1	

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

RATINGS AND CHARACTERISTIC OF SR20100

FIG.1-FORWARD CURRENT DERATING CURVE

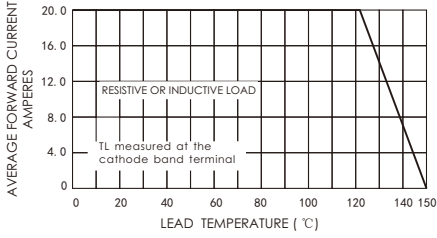


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

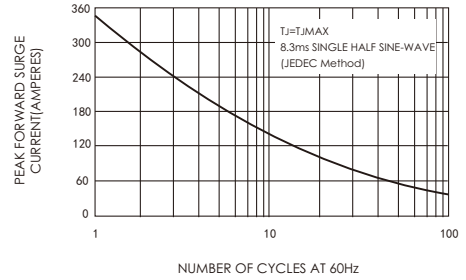


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

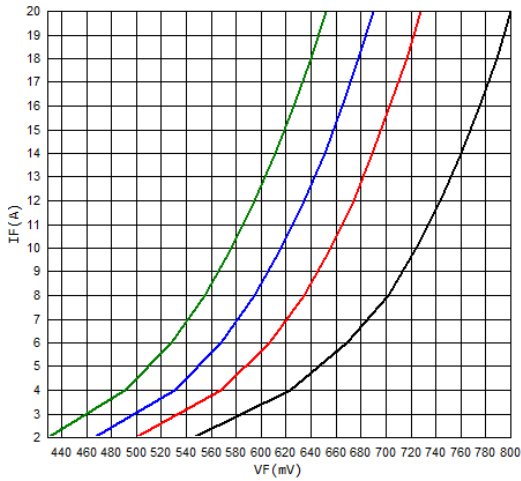


FIG.4-TYPICAL REVERSE CHARACTERISTICS

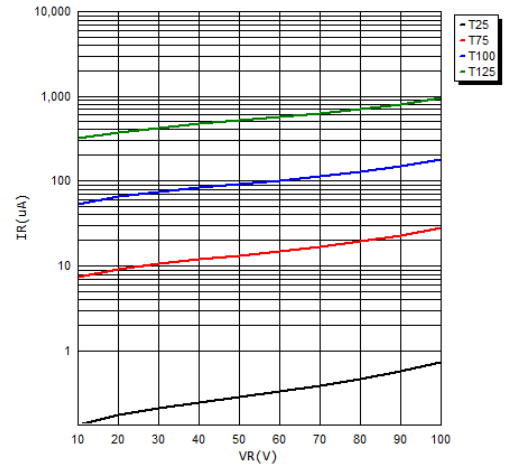


FIG.5-TYPICAL JUNCTION CAPACITANCE

