

## Schottky Barrier Rectifier

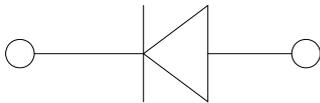


### Features

- Guardring for overvoltage protection
- Low power loss
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

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



### Mechanical Data

- **Package:** R-1  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, Halogen free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

### ■ Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1S20	1S40	1S60	1S100
Device marking code			1S20	1S40	1S60	1S100
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	20	40	60	100
Average Rectified Output Current @60Hz sine wave, Resistance load, Ta (FIG.1)	I <sub>O</sub>	A	1.0			
Surge(Non-repetitive)Forward Current @60Hz Half-sine wave,1 cycle, Ta=25°C	I <sub>FSM</sub>	A	30			
Storage Temperature	T <sub>stg</sub>	°C	-55 ~+150			
Junction Temperature	T <sub>j</sub>	°C	-55 ~+125		-55 ~+150	

### ■ Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	1S20	1S40	1S60	1S100
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =1.0A	0.55		0.7	0.85
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	mA	T <sub>a</sub> =25°C	0.2			0.1
			T <sub>a</sub> =100°C	20			5
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	50			40

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



# 1S20 THRU 1S100

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1S20	1S40	1S60	1S100
Thermal Resistance	R <sub>θJ-A</sub>	°C/W	85			

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
1S20~1S100	D1	Approximate 0.19	Approximate 5000	5000	50000	Tape
1S20~1S100	C1	Approximate 0.19	Approximate 1000	1000	50000	Bulk

## ■ Characteristics(Typical)

FIG.1: I<sub>o</sub>-T<sub>a</sub> Curve

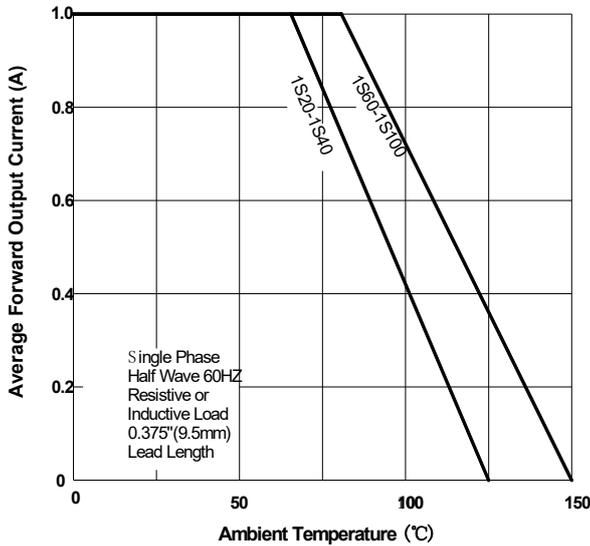


FIG.2: Forward Surge Current Capability

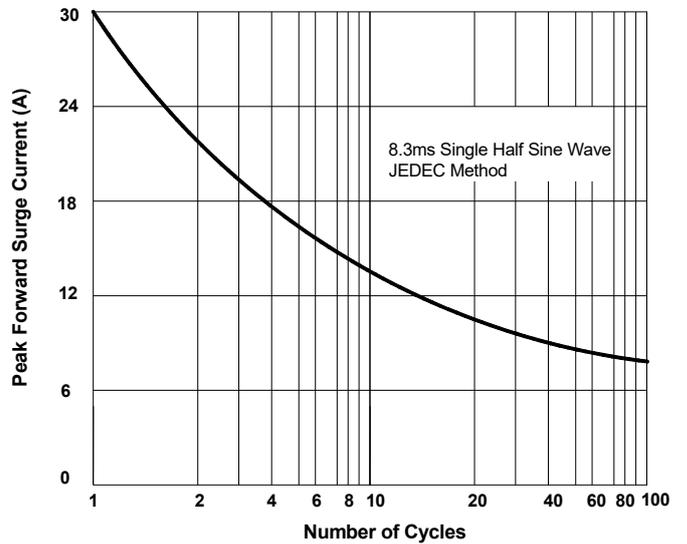


FIG.3: Forward voltage

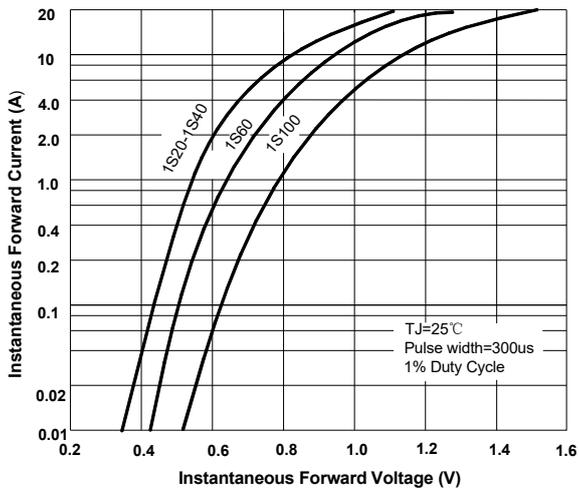
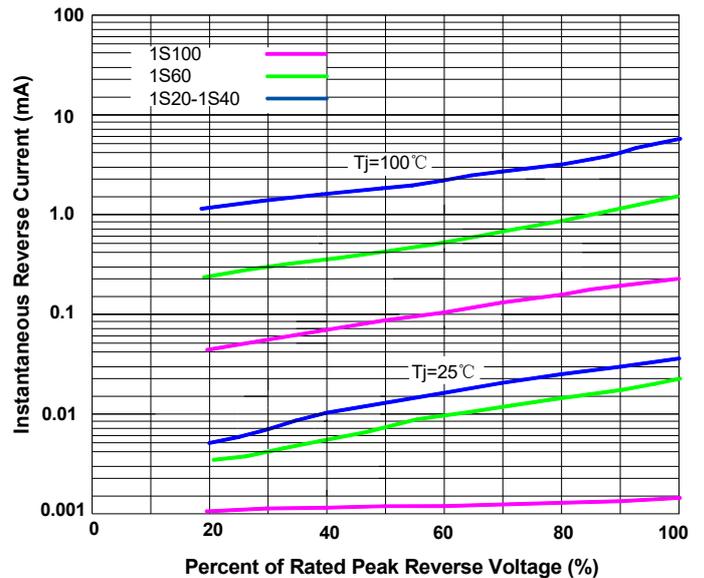


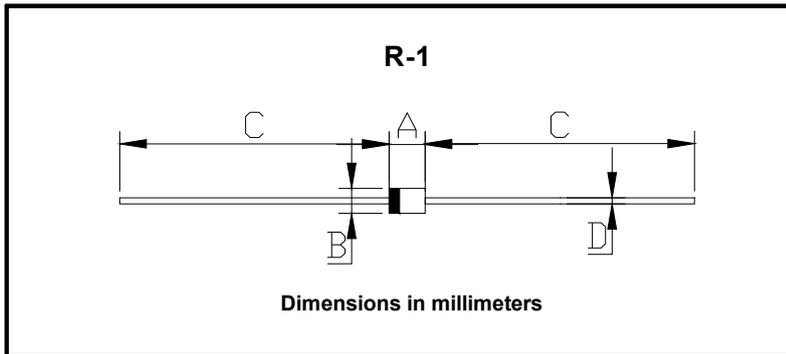
FIG.4: Typical Reverse Characteristics





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## ■ Outline Dimensions



<b>R-1</b>		
Dim	Min	Max
A	3.00	3.30
B	2.00	2.70
C	25.4	/
D	0.53	0.64



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