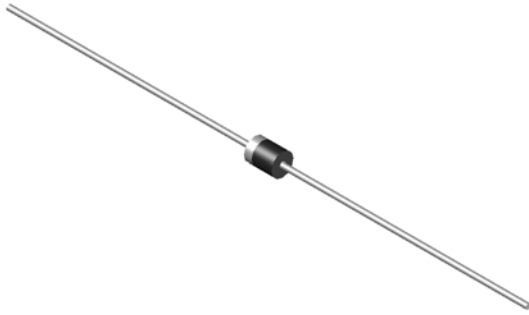


Schottky Barrier Rectifier

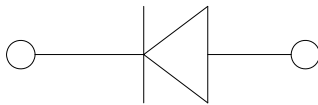


Features

- Guardring for overvoltage protection
- Very small conduction losses
- 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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1S20	1S30	1S40	1S50	1S60	1S80	1S100	1S150	1S200
Device marking code			1S20	1S30	1S40	1S50	1S60	1S80	1S100	1S150	1S200
Repetitive Peak Reverse Voltage	V _{RRM}	V	20	30	40	50	60	80	100	150	200
Average Rectified Output Current @60Hz sine wave, Resistance load, T _a (FIG.1)	I _O	A	1.0								
Surge(Non-repetitive)Forward Current @60Hz Half-sine wave, 1 cycle, T _a =25°C	I _{FSM}	A	30								
Storage Temperature	T _{stg}	°C	-55 ~+150								
Junction Temperature	T _j	°C	-55 ~+125				-55 ~+150				

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	1S20	1S30	1S40	1S50	1S60	1S80	1S100	1S150	1S200
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=1.0A	0.55			0.7		0.85			
Maximum DC reverse current at rated DC blocking voltage per diode	IR	mA	Ta=25°C	0.2					0.1			
			Ta=100°C	20					5			
Typical junction capacitance	Cj	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	110								



1S20 THRU 1S200

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	1S20	1S30	1S40	1S50	1S60	1S80	1S100	1S150	1S200
Thermal Resistance	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	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
1S20~1S200	D1	Approximate 0.19	Approximate 5000	5000	50000	Tape
1S20~1S200	C1	Approximate 0.19	Approximate 1000	1000	50000	Bulk

■ Characteristics(Typical)

FIG.1: I_o - T_a Curve

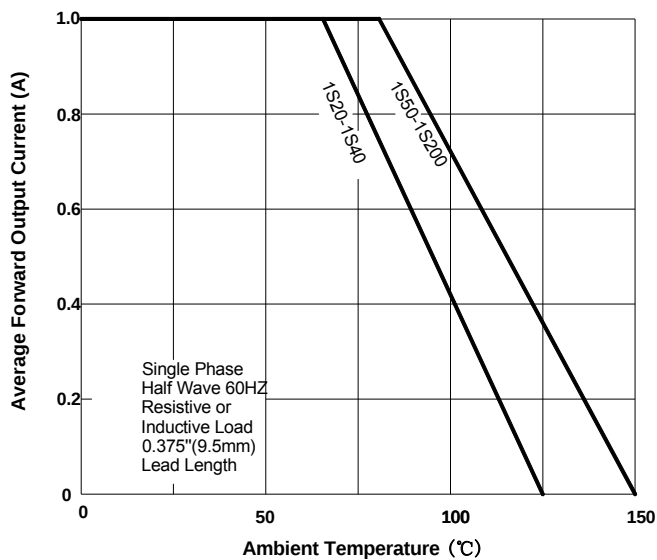


FIG.2: Surge Forward Current Capability

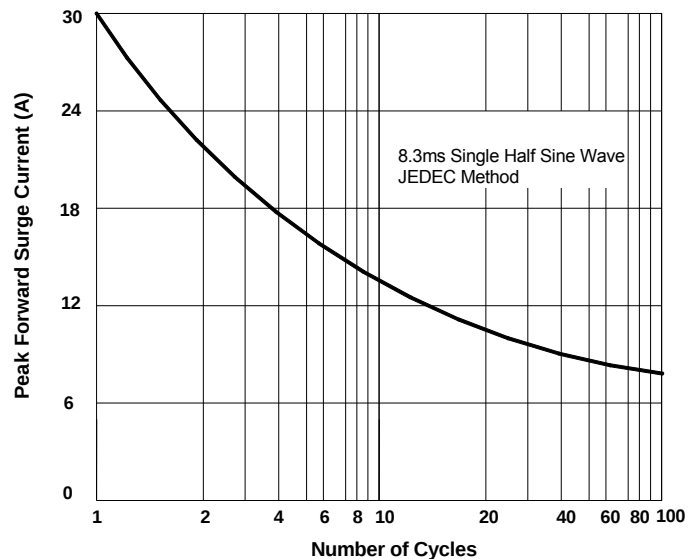


FIG.3: Forward Voltage

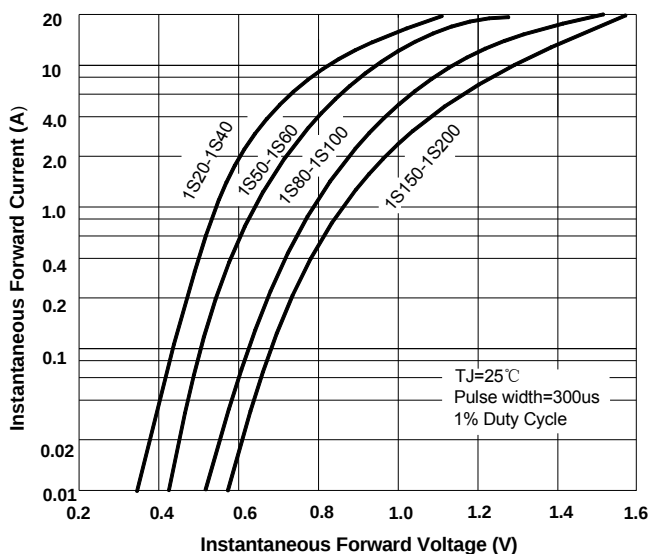
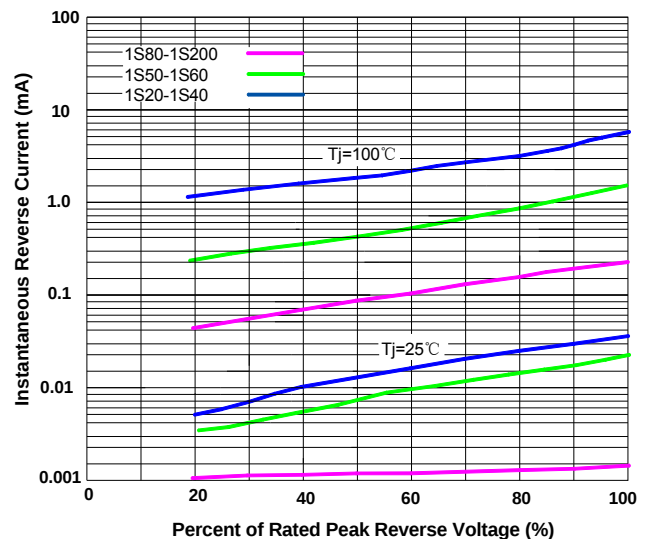
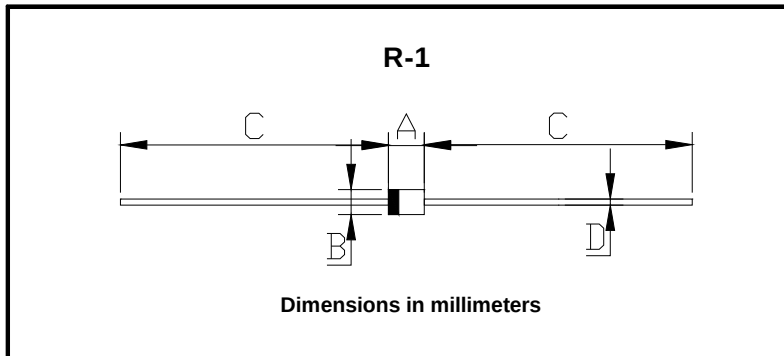


FIG.4: Typical Reverse Characteristics





■ Outline Dimensions



R-1		
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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