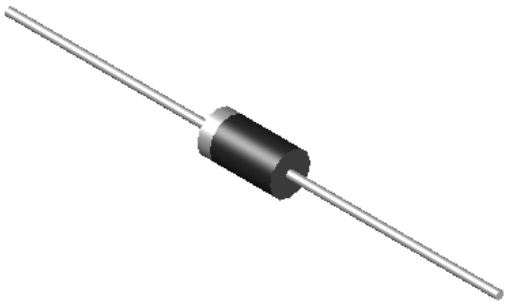
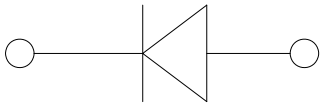
Schottky Barrier Rectifier





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:** DO-201AD (DO-27)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

■Maximum Ratings (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SR520	SR540	SR545	SR560	SR5100	SR5150	SR5200
Device marking code			SR520	SR540	SR545	SR560	SR5100	SR5150	SR5200
Repetitive Peak Reverse Voltage	V_{RRM}	V	20	40	45	60	100	150	200
Average Rectified Output Current @60Hz sine wave, Resistance load, T (FIG.1)	I_O	A	5.0						
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Ta=25℃	I_{FSM}	A	120						
Storage Temperature	T_{stg}	℃	-55 ~+175						
Junction Temperature	Tj	℃	-55 ~+150				-55 ~+175		

■Electrical Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SR520	SR540	SR545	SR560	SR5100	SR5150	SR5200
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=5.0A	0.55			0.7	0.85		
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	mA	Ta=25℃	0.2				0.1		
			Ta=100℃	20				5		
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	280			220	180	100	

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

Note2:Pulse test:pulse widh 40mS

■Thermal Characteristics (T_a=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SR520	SR530	SR540	SR545	SR550	SR560	SR580	SR5100	SR5150	SR5200
Thermal Resistance	$R_{\theta J-A}$	℃/W	20									

■Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SR520~SR5200	D1	Approximate 1.05	1250	1250	12500	Tape
SR520~SR5200	C1	Approximate 1.05	250	250	12500	Bulk

■ Characteristics (Typical)

FIG.1: Io-Ta Curve

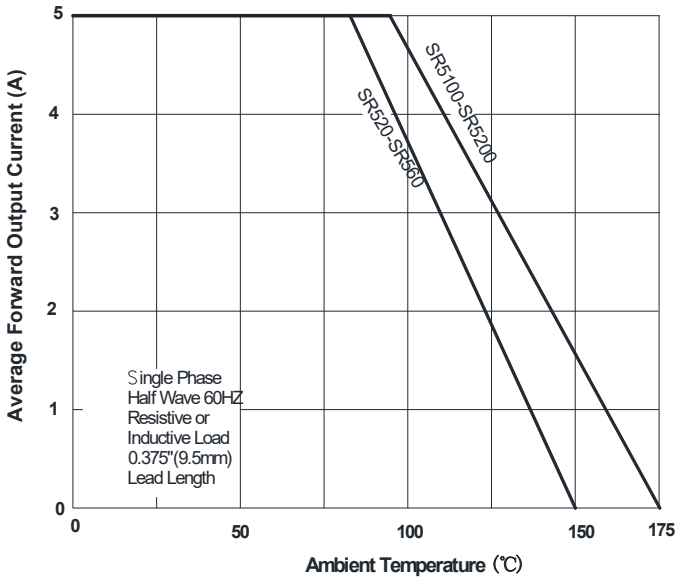


FIG.2: Forward Surge Current Capability

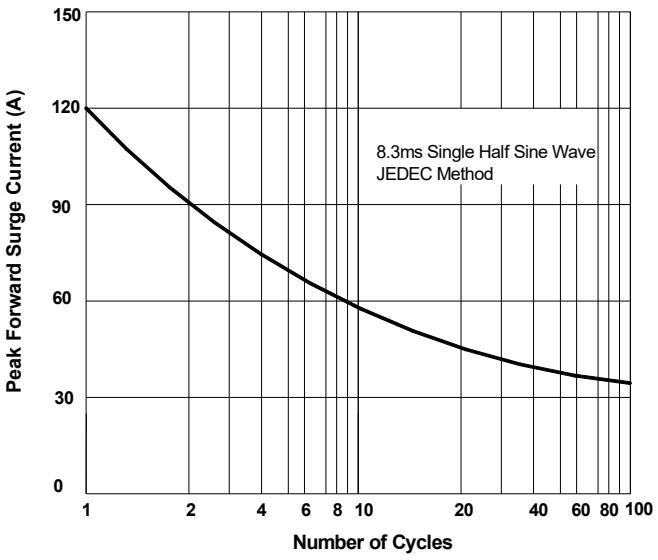


FIG.3: Forward Voltage

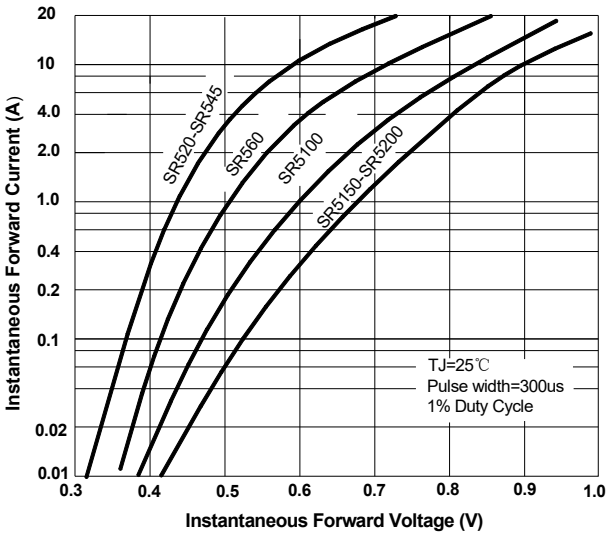
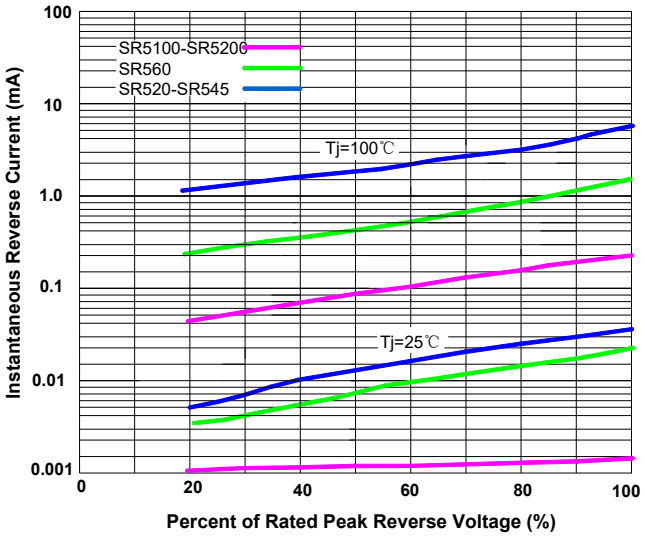
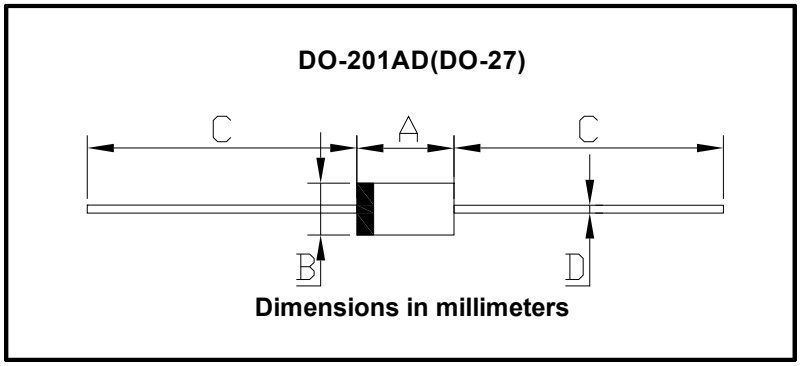


FIG.4: Typical Reverse Characteristics



■ Outline Dimensions



DO-201AD(DO-27)		
Dim	Min	Max
A	8.50	9.50
B	5.00	5.60
C	25.4	/
D	1.20	1.30

Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.
Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.