



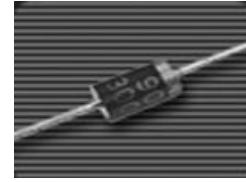
SR120 thru SR1200

Schottky barrier Rectifiers

Reverse Voltage 20 to 200 Volts Forward Current 1.0 Amperes

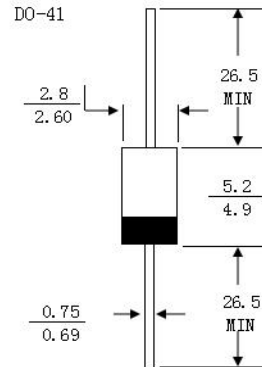
Features

- ◆ Metal-Semiconductor junction with guardring
- ◆ Epitaxial construction
- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ The plastic material carries UL recognition 94V-0
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



Mechanical Data

- ◆ Case: JEDEC DO-204AL(DO-41)/A-405 molded plastic
- ◆ Polarity : Color band denotes cathode
- ◆ Weight : DO-41 - 0.012 ounce, 0.33 gram
A-405 - 0.008 ounce, 0.22 gram
- ◆ Mounting position : Any



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Parameter	Symbols	SR 120	SR 130	SR 140	SR 150	SR 160	SR 170	SR 180	SR 190	SR 1100	SR 1150	SR 1200	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	150	200	Volts	
Maximum RMS voltage	V_{RMS}	14	21	28	34	42	49	56	63	70	105	140	Volts	
Maximum DC blocking voltage to	V_{DC}	20	30	40	50	60	70	80	90	100	150	200	Volts	
Maximum average forward rectified current .375" (9.5mm) lead length@ $T_L=100^\circ\text{C}$	$I_{F(AV)}$	1.0											Amp	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	40											Amps	
Maximum forward voltage at 1.0A DC	V_F	0.5		0.7		0.8		0.9					Volts	
Maximum average reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	0.5								0.2				mA
		10.0				5.0				2.0				
Typical thermal resistance (Note2)	R_{QJA}	50.0											$^\circ\text{C}/\text{W}$	
Typical junction capacitance (Note1)	C_J	110				80								PF
Operating junction temperature range	T_J	-55 to +125						-55 to +150						$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150											$^\circ\text{C}$	

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal Resistance Junction to Lead.

RATINGS AND CHARACTERISTIC CURVES

($T_A=25^\circ\text{C}$ unless otherwise noted)



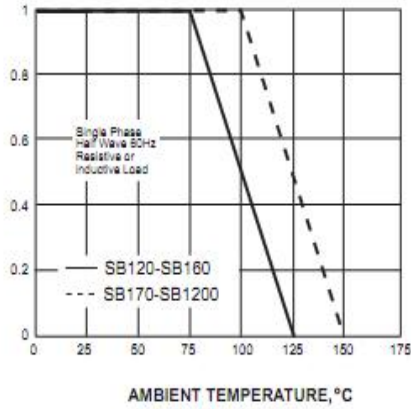
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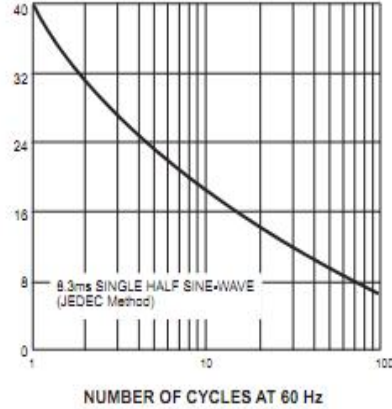
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



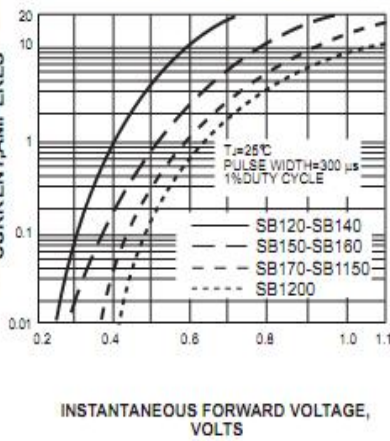
PEAK FORWARD SURGE CURRENT,
AMPERES

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



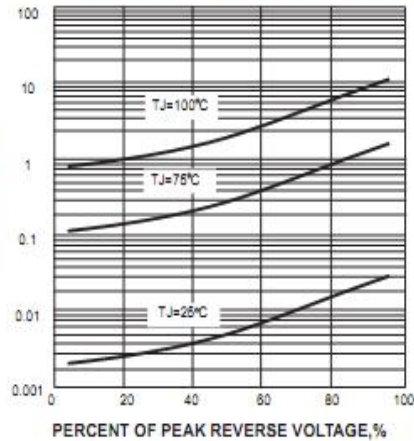
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



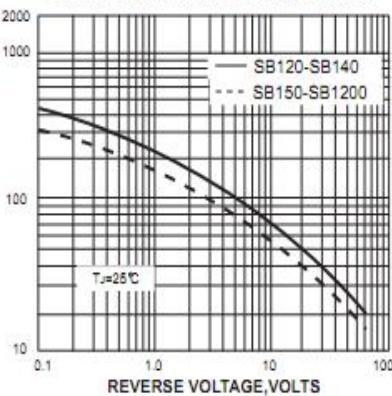
INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE
 $^\circ\text{C/W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

