



Features

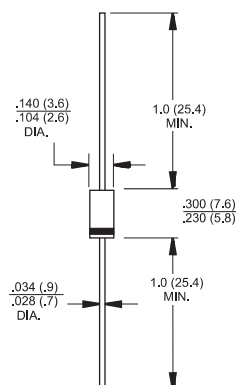
- ✧ Metal-Semiconductor junction with guard ring
- ✧ Epitaxial construction
- ✧ Low forward voltage drop, low switching losses
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ✧ The plastic material carries U/L recognition 94V-0

Mechanical Data

- ✧ Case: JEDEC DO-15, molded plastic
- ✧ Terminals: Axial lead, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode
- ✧ Weight: 0.014 ounces, 0.39 grams
- ✧ Mounting position: Any

VOLTAGE RANGE: 20 --- 200 V
CURRENT: 2.0 A

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

Parameter	Symbol	SB220	SB230	SB240	SB250	SB260	SB280	SB2100	SB2150	SB2200	UNITS
Maximum recurrent peak reverse voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current 9.5mm lead length, @T _A =75°C	I _{F(AV)}	2.0									A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	50.0									A
Maximum instantaneous forward voltage @ 2.0A (Note 1)	V _F	0.45	0.55		0.7		0.85				V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	0.5					0.1				mA
		10.0									
Typical junction capacitance (Note2)	C _J	170									pF
Typical thermal resistance (Note3)	R _{θJA}	35									°C/W
Operating junction temperature range	T _J	- 55 ---- + 150					- 55 ---- + 175				°C
Storage temperature range	T _{STG}	- 55 ---- + 150					- 55 ---- + 175				°C

NOTE: 1. Pulse test: 300us pulse width, 1% duty cycle.

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

Ratings AND Characteristic Curves

FIG.1 -- FORWARD CURRENT DERATING CURVE

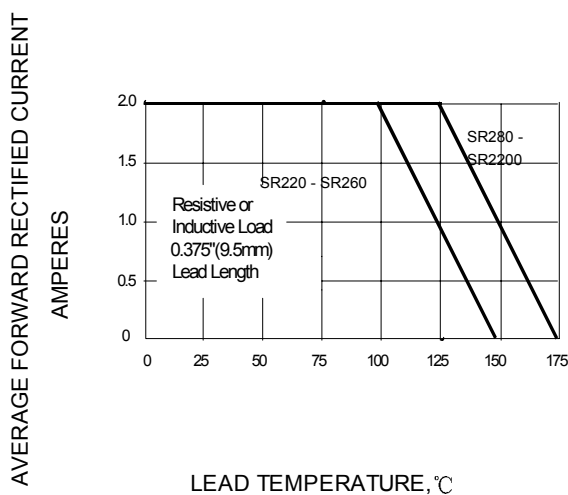


FIG.2 -- PEAK FORWARD SURGE CURRENT

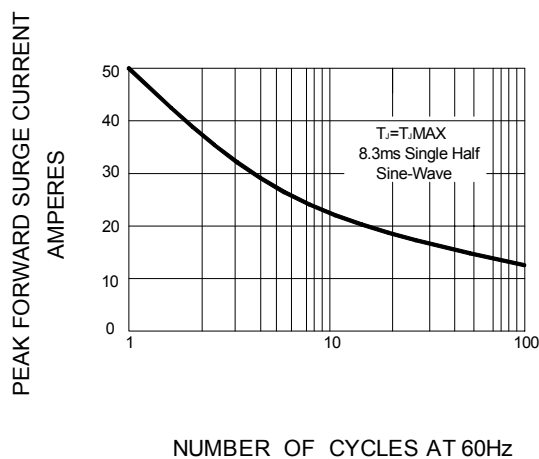


FIG.3 -- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

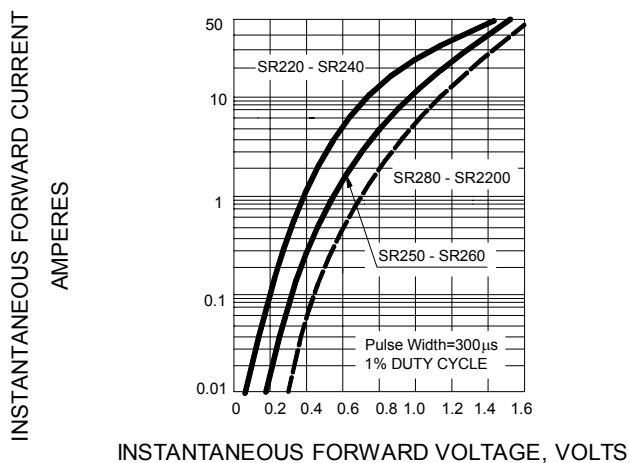
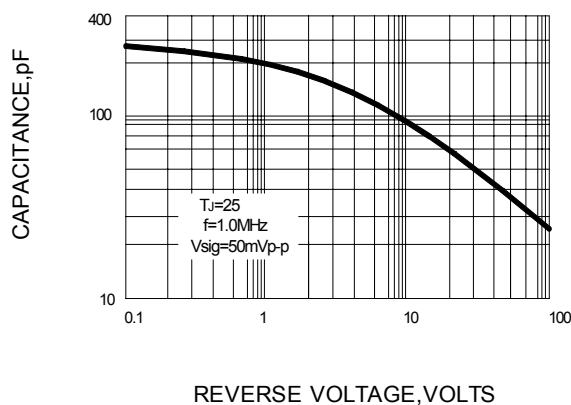


FIG.4 -- TYPICAL JUNCTION CAPACITANCE



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
DO-15	3000/AMMO	30000	42X28X31	12.00	10.00