DEC

SBR1620 THRU SBR16100

CURRENT 16.0Amperes
VOLTAGE 20 to 100 Volts

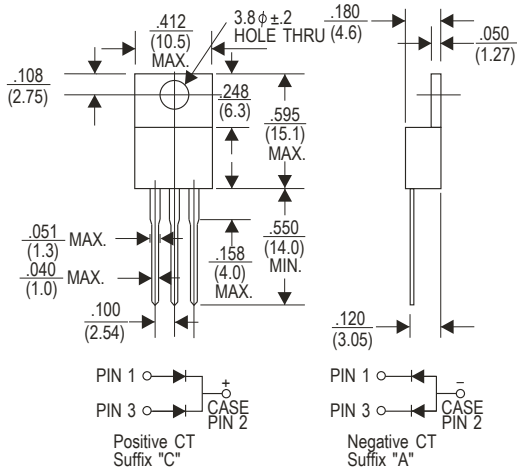
Features

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Dual rectifier construction
- High temperature soldering guaranteed : 250℃/10 seconds, 0.25" (6.35mm) from case

Mechanical Data

- Case : JEDEC TO-220 molded plastic body
- Terminals : Lead solderable per MIL-STD-750, Method 2026
- Polarity : As marked. No suffix indicates Common Cathode, suffix "A" indicates Common Anode
- Mounting Position : Any
- Weight : 0.08 ounce, 2.24 grams

TO-220



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%)

		Symbols	SBR 1620	SBR 1630	SBR 1640	SBR 1650	SBR 1660	SBR 1680	SBR 16100	Units
Maximum repetitive peak reverse voltage		V_{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS voltage		V_{RMS}	14	21	28	35	42	56	70	Volts
Maximum DC blocking voltage		V_{DC}	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current at Tc=95℃		$I_{(AV)}$	16.0							Amps
Repetitive peak forward current(square wavr, 20KHZ) at Tc=105℃		I_{FRM}	32.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	150.0							Amps
Maximum instantaneous forward voltage at 8.0A (Note 1)		V_F	0.65			0.75		0.80	0.85	Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	T_A=25℃	I_R	1.0							mA
	T_A=125℃		30			50				
Typical thermal resistance (Note 2)		$R\Theta_{JC}$	3.0							℃/W
Operating junction temperature range		T_J	-65 to +125			-65 to +150				℃
Storage temperature range		T_{STG}	-65 to +150							℃

Notes:
(1) Pulse test: 300μS pulse width, 1% duty cycle
(2) Thermal resistance from junction to case

RATINGS AND CHARACTERISTIC CURVES SBR1620-SBR16100

FIG.1-FORWARD CURRENT DERATING CURVE

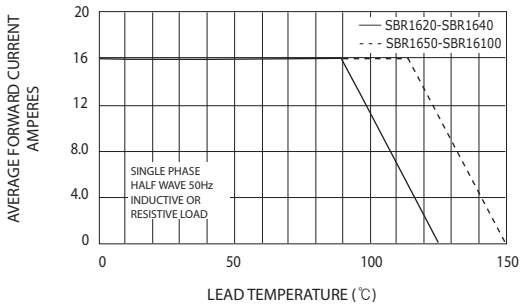


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

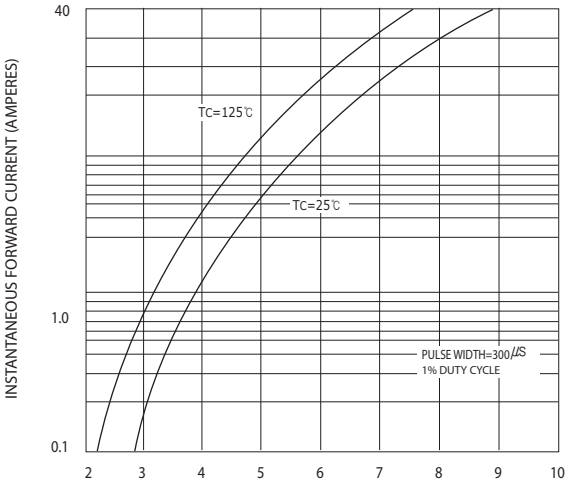


FIG.4-TYPICAL JUNCTION CAPACITANCE

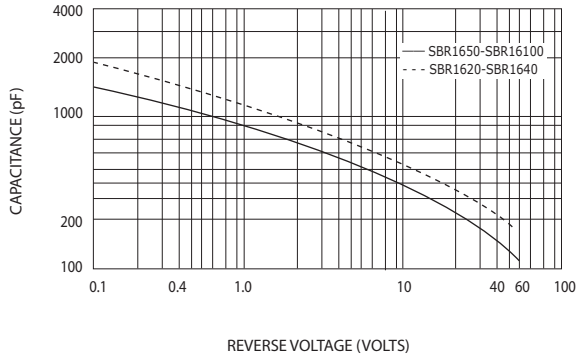


FIG.3-TYPICAL REVERSE CHARACTERISTICS

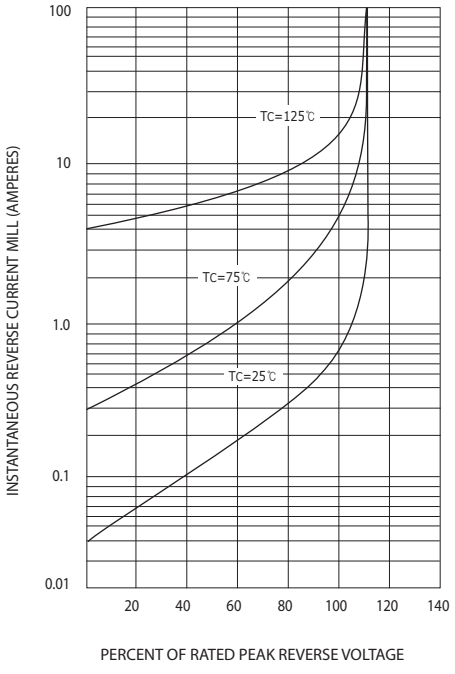


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT