

SBR4030 THRU SBR4060

CURRENT 40.0Amperes
VOLTAGE 30 to 60 Volts

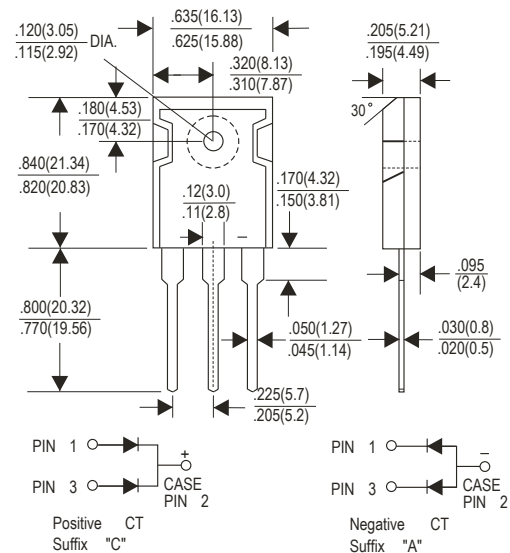
Features

- 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 °C /10 seconds, 0.17" (4.3mm) from case

Mechanical Data

- Case : JEDEC TO-3P 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 : 0.20 ounce, 5.6 grams

TO-3P



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

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

		Symbols	SBR4030	SBR4035	SBR4040	SBR4045	SBR4050	SBR4060	Units
Maximum repetitive peak reverse voltage		V_{RRM}	30	35	40	45	50	60	Volts
Maximum RMS voltage		V_{RMS}	21	24	28	32	35	42	Volts
Maximum DC blocking voltage		V_{DC}	30	35	40	45	50	60	Volts
Maximum average forward rectified current at $T_C=100^{\circ}C$ $V_R(equiv.)<0.2V_{R(DC)}$		$I_{(AV)}$	40.0						Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	400.0						Amps
Maximum instantaneous forward voltage at 20A (Note 1)		V_F	0.55				0.65		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	$T_A=25^{\circ}C$	I_R	10.0						mA
	$T_A=125^{\circ}C$		100				150		
Typical thermal resistance (Note 2)		$R_{\theta JC}$	1.4						$^{\circ}C/W$
Operating junction temperature range		T_J	-65 to +125						$^{\circ}C$
Storage temperature range		T_{STG}	-65 to +150						$^{\circ}C$

Notes:

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

RATINGS AND CHARACTERISTIC CURVES SBR4030 THRU SBR4060

FIG.1-FORWARD CURRENT DERATING CURVE

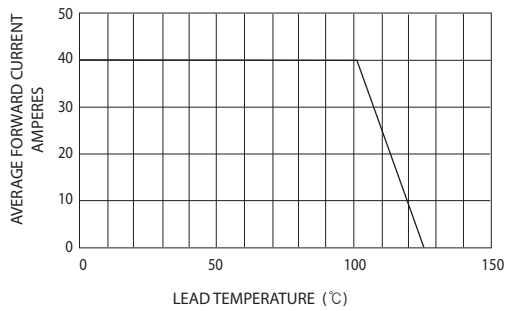


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

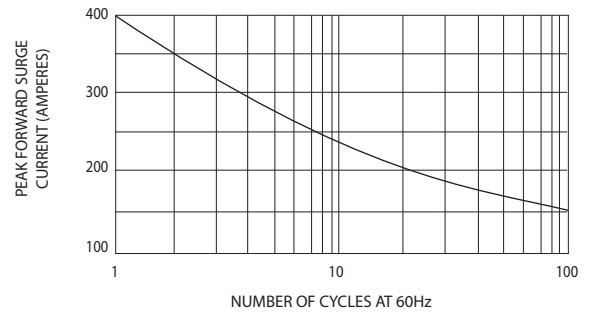


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

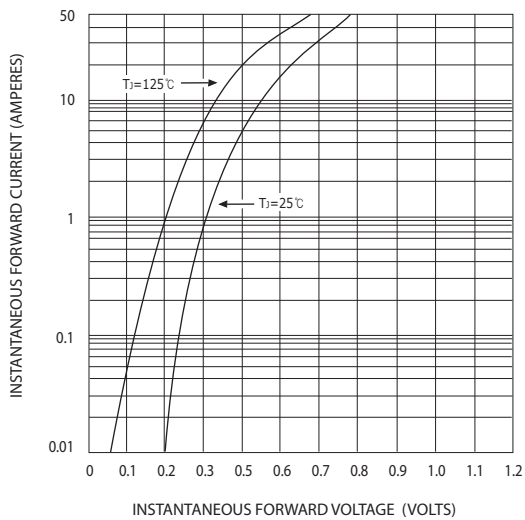


FIG.4-TYPICAL REVERSE CHARACTERISTICS

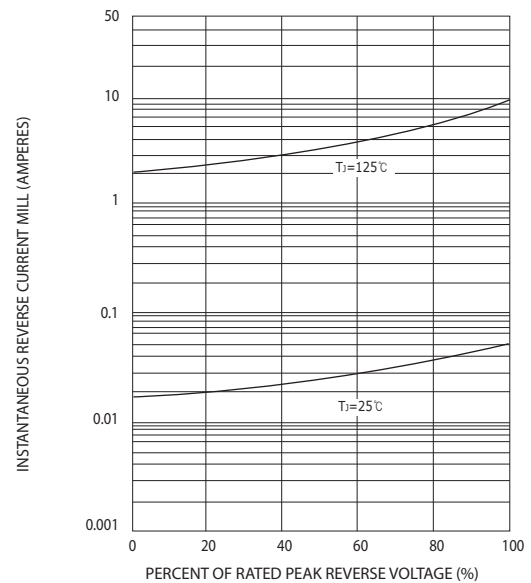


FIG.5-TYPICAL JUNCTION CAPACITANCE

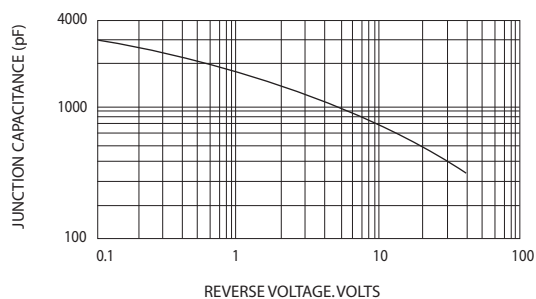


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

