

SBR5030 THRU SBR5060

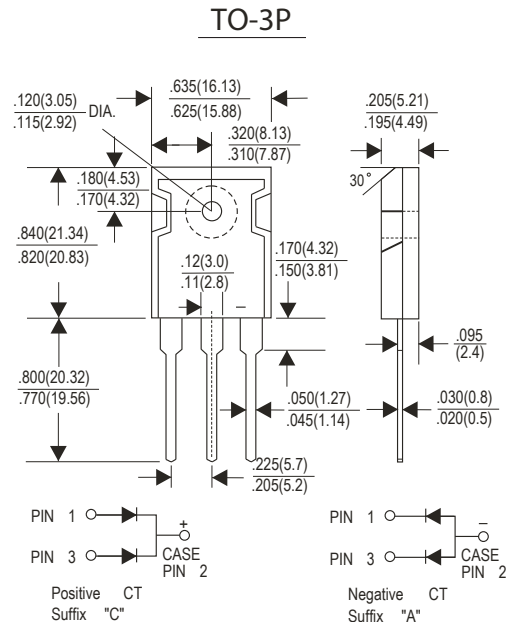
CURRENT 50.0Amperes
VOLTAGE 30 to 60 Volts

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 : 0.20ounce, 5.6 grams



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	SBR5030	SBR5035	SBR5040	SBR5045	SBR5050	SBR5060	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 $V_{R(equiv.)} < 0.2V_{R(DC)}$ (See Fig 1)	$I_{(AV)}$	50.0						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 25A (Note 1)	V_F	0.65			0.70			Volts
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	$T_A=25\text{ }^\circ\text{C}$	10.0						mA
	$T_A=125\text{ }^\circ\text{C}$	100			150			
Typical thermal resistance (Note 2)	$R_{\theta Jc}$	1.4						$^\circ\text{C/W}$
Operating junction temperature range	T_J	-65 to +125						$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150						$^\circ\text{C}$

Notes:

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



RATINGS AND CHARACTERISTIC CURVES SBR5030-SBR5060

FIG.1-FORWARD CURRENT DERATING CURVE

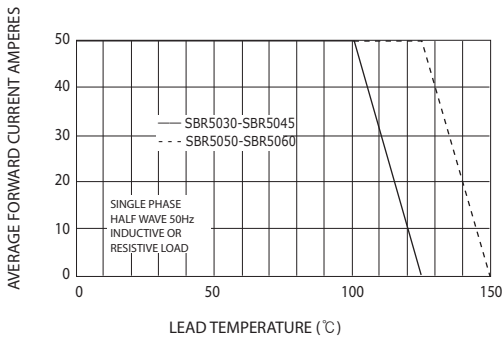


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

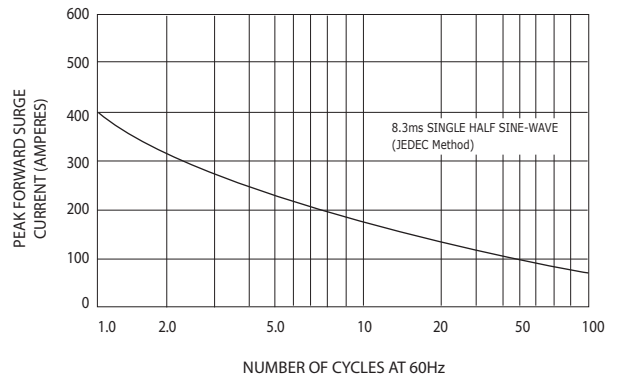


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

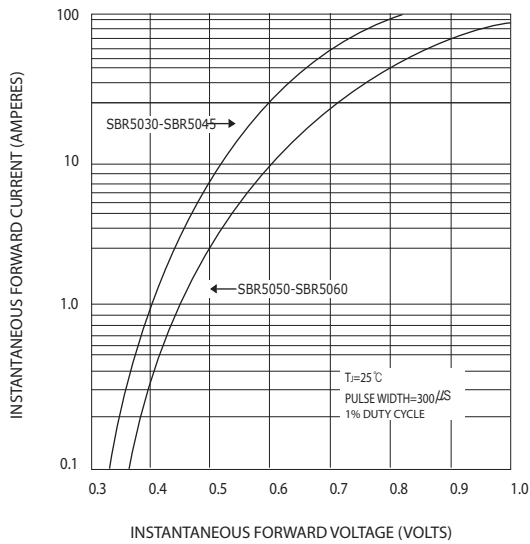


FIG.3-TYPICAL REVERSE CHARACTERISTICS

