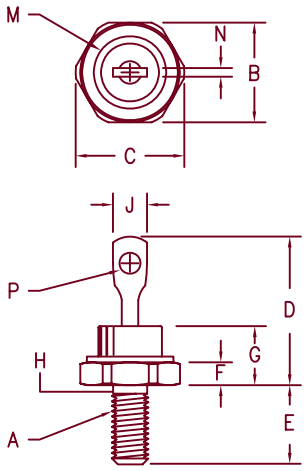
THE DATASHEET OF

SBR3050

30 Amp Schottky Rectifier

SBR3035 – SBR3050



Notes:
1. 10–32 UNF3A threads
2. Full threads within 2 1/2 threads
3. Standard Polarity: Stud is Cathode. Reverse Polarity Stud is Anode

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	---	---	---	---	1
B	.424	.437	10.77	11.10	
C	---	.505	---	12.82	
D	.600	.800	15.24	20.32	
E	.422	.453	10.72	11.50	
F	.075	.175	1.91	4.44	
G	---	.405	---	10.29	
H	.163	.189	4.15	4.80	2
J	---	.250	2.54	3.56	
M	---	.350	---	8.89	Dia.
N	.020	.065	.510	1.65	
P	.070	.100	1.78	2.54	Dia.

D0203AA (D04)

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SBR3035*	21FQ035 30FQ035	35V	35V
SBR3040*	21FQ040 30FQ040	40V	40V
SBR3045*	21FQ045 30FQ045	45V	45V
SBR3050*		50V	50V

*Add Suffix R For Reverse Polarity

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- V_{RRM} 35 to 50V
- 30 Amperes
- Reverse Energy Tested

Electrical Characteristics

Average forward current	$I_{F(AV)}$	30 Amps	T_C = 145°C Square wave, $R_{\theta JC}$ = 1.5°C/W
Maximum surge current	I_{FSM}	600 Amps	8.3 ms, half sine T_J = 175°C
Max repetitive peak reverse current	$I_{R(OV)}$	2 Amps	f = 1 KHz, 25°C, 1 µsec Square wave
Max peak forward voltage	V_{FM}	.49 Volts	I_{FM} = 30A: T_J = 175°C*
Max peak forward voltage	V_{FM}	.63 Volts	I_{FM} = 30A: T_J = 25°C*
Max peak reverse current	I_{RM}	25 mA	V_{RRM}, T_J = 125°C*
Max peak reverse current	I_{RM}	1.5 mA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J	1800 pF	V_R = 5.0V, T_J = 25°C

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	−55°C to 175°C
Operating junction temp range	T_J	−55°C to 175°C
Max thermal resistance	$R_{\theta JC}$	1.5°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.5°C/W Case to sink
Mounting torque		12–15 inch pounds
Weight		0.2 ounces (6.0 grams) typical

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Figure 1
Typical Forward Characteristics

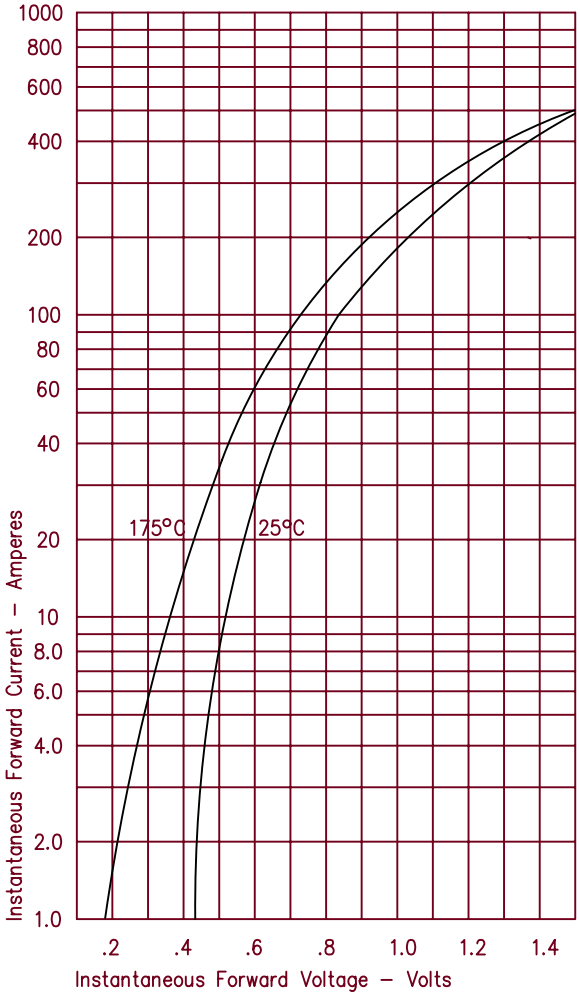


Figure 2
Typical Reverse Characteristics

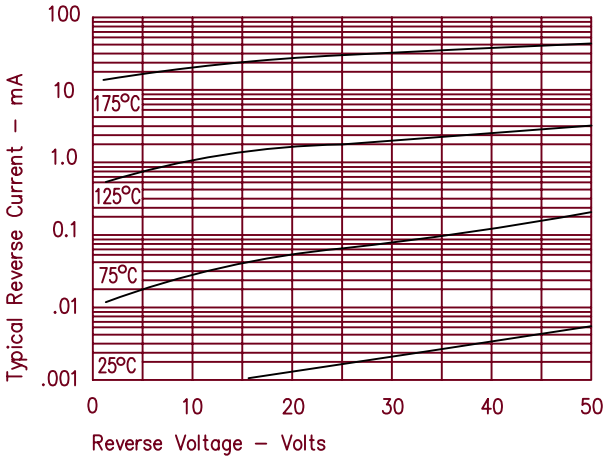


Figure 3
Typical Junction Capacitance

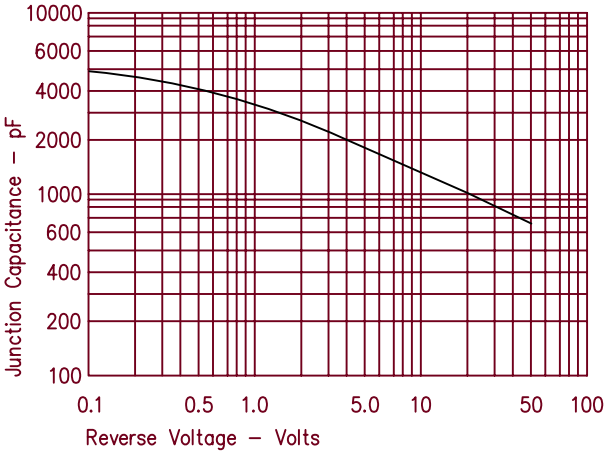


Figure 4
Forward Current Derating

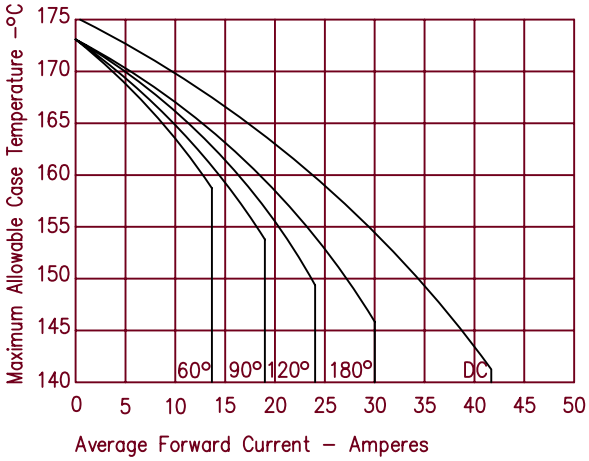
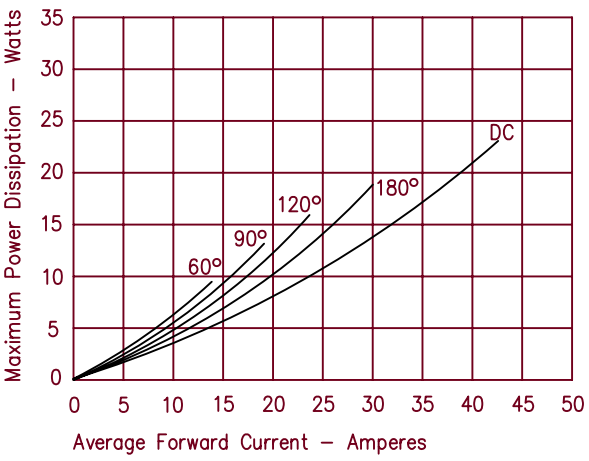


Figure 5
Maximum Forward Power Dissipation



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