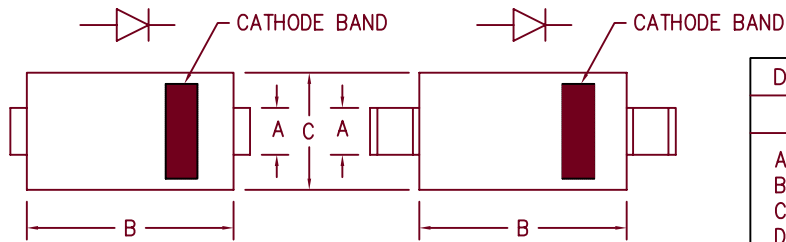




**THE DATASHEET OF
5820SMJ/TR13**



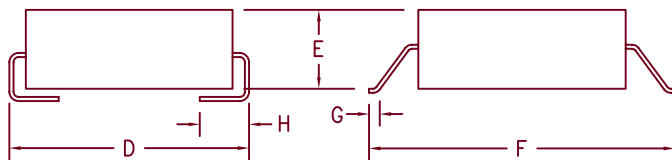
3 Amp Schottky Rectifier 5820SM — 5822SM



D0214AB

D0215AB

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.117	.123	2.97	3.12	
B	.260	.280	6.60	7.11	
C	.220	.245	5.59	6.22	
D	.307	.322	7.80	8.18	
E	.075	.095	1.91	2.41	
F	.380	.400	9.65	10.16	
G	.025	.040	.640	1.02	
H	.030	.060	.760	1.52	



Microsemi Catalog Number	Industry Part No.	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
5820SM*	MBR320T3 SK32	20V	20V
5821SM*	MBR330T3 SK33	30V	30V
5822SM*	MBR340T3 SK34	40V	40V

*Add Suffix J For J Lead or G For Gull Wing Lead Configuration

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- High Reliability
- High Current Capability
- Surface mount package

Electrical Characteristics

		5820SM	5821SM	5822SM	
Average forward current	$I_F(AV)$	3A	3A	3A	Square wave, $T_L = 127^\circ C$, $R_{\theta JL} = 20^\circ C/W$ 8.3ms, half sine, $T_J = 150^\circ C$ $I_{FM} = 1A, T_J = 25^\circ C^*$ $I_{FM} = 3A, T_J = 25^\circ C^*$ $I_{FM} = 9.4A, T_J = 25^\circ C^*$ $V_{RRM}, T_J = 25^\circ C$ $V_R = 5.0V, T_J = 25^\circ C$
Maximum surge current	I_{FSM}	150A	150A	150A	
Max peak forward voltage	V_{FM}	.36V	.37V	.38V	
Max peak forward voltage	V_{FM}	.46V	.48V	.50V	
Max peak forward voltage	V_{FM}	.65V	.67V	.70V	
Max peak reverse current	I_{RM}	1.5mA	1.5mA	1.5mA	
Typical junction capacitance	C_J	265pF	265pF	265pF	

*Pulse test: Pulse width 300 μ sec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temperature range	T_{STG}	-55°C to 150°C
Operating junction temp range	T_J	-55°C to 150°C
Maximum thermal resistance	$R_{\theta JL}$	20°C/W Junction to Lead
Weight		.008 ounces (.22 grams) typical



SCOTTSDALE

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05-09-07 Rev. 4

5820SM – 5822SM

Figure 1
Typical Forward Characteristics

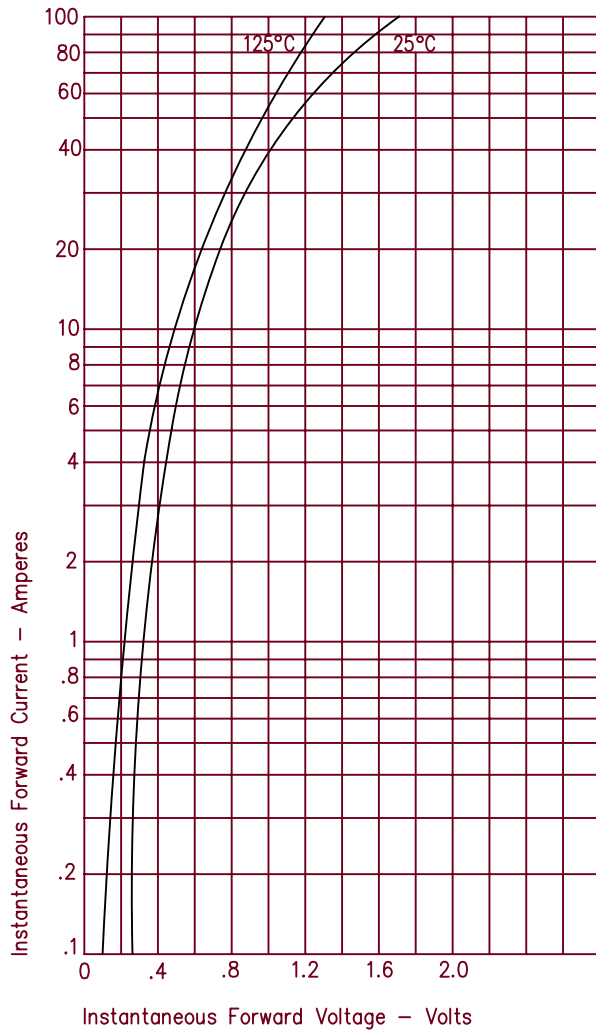


Figure 3
Typical Junction Capacitance

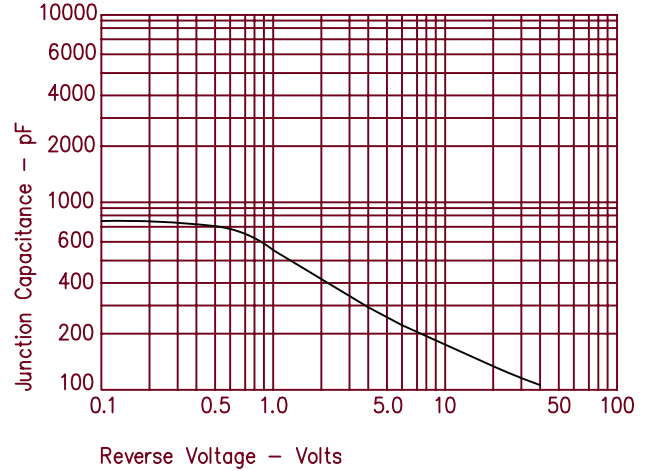
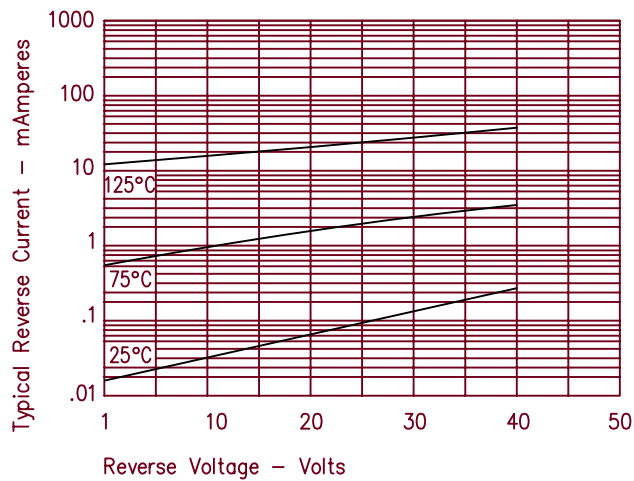


Figure 2
Typical Reverse Characteristics



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-  Alternative Solution
-  Excess Inventory Management