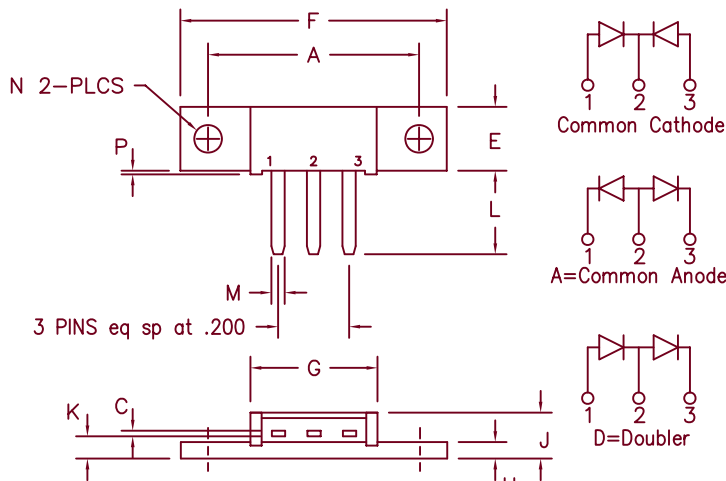


# Schottky Diode FST8115, FST8120



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.180	1.195	29.97	30.35	
C	.027	.037	0.69	0.94	
E	.350	.370	8.89	9.40	
F	1.490	1.510	37.85	38.35	
G	.695	.715	17.65	18.16	
H	.088	.098	2.24	2.49	
J	.240	.260	6.10	6.60	
K	.115	.135	2.92	3.43	
L	.460	.480	11.68	12.19	
M	.065	.085	1.65	2.16	
N	.151	.161	3.84	4.09	Dia.
P	.015	.025	0.38	0.64	

Note: Baseplate Common with Pin 2

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST8115*		15V	15V
FST8120*	87CNQ020A	20V	20V

\*Add the Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard ring protection
- Common cathode center tap
- 2X40 Amperes avg.
- 125°C Junction temperature
- Reverse energy tested
- Low forward voltage

## Electrical Characteristics

Average forward current per pkg	I <sub>F(AV)</sub> 80 Amps	T <sub>C</sub> = 107°C, Square wave, R <sub>θJC</sub> = 0.5°C/W
Average forward current per leg	I <sub>F(AV)</sub> 40 Amps	T <sub>C</sub> = 107°C, Square wave, R <sub>θJC</sub> = 1.0°C/W
Maximum surge current per leg	I <sub>FSM</sub> 800 Amps	8.3 ms, half sine, T <sub>J</sub> = 125°C
Max repetitive peak reverse current per leg	I <sub>R(OV)</sub> 2 Amps	f = 1 KHZ, 25°C, 1 μsec square wave
Max peak forward voltage per leg	V <sub>FM</sub> 0.32 Volts	I <sub>FM</sub> = 40A: T <sub>J</sub> = 125°C
Max peak forward voltage per leg	V <sub>FM</sub> 0.44 Volts	I <sub>FM</sub> = 40A: T <sub>J</sub> = 25°C *
Max peak reverse current per leg	I <sub>RM</sub> 1.0 Amp	V <sub>RRM</sub> , T <sub>J</sub> = 125°C*
Max peak reverse current per leg	I <sub>RM</sub> 10 mA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Typical junction capacitance per leg	C <sub>J</sub> 4000 pF	V <sub>R</sub> = 5.0V, T <sub>C</sub> = 25°C

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

## Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-55°C to 125°C
Operating junction temp range	T <sub>J</sub>	-55°C to 125°C
Max thermal resistance per leg	R <sub>θJC</sub>	1.0°C/W Junction to case
Max thermal resistance per pkg	R <sub>θJC</sub>	0.5°C/W Junction to case
Typical thermal resistance (greased)	R <sub>θCS</sub>	0.3°C/W Case to sink
Mounting Base Torque		10 inch pounds maximum
Weight		0.3 ounce (8.4 grams) typical



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05-23-07 Rev. 4

# FST8115, FST8120

Figure 1  
Typical Forward Characteristics – Per Leg

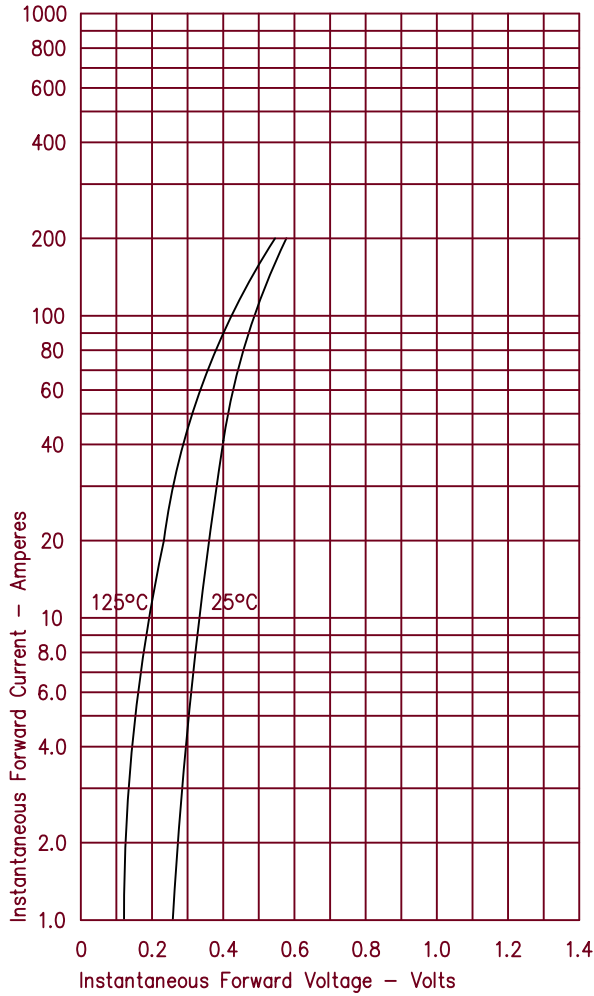


Figure 3  
Typical Junction Capacitance – Per Leg

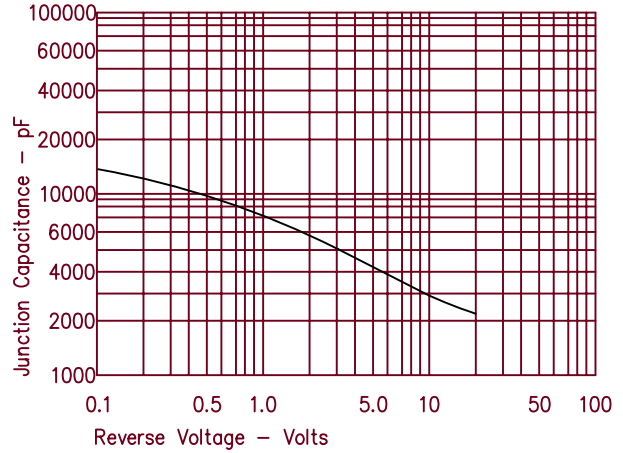


Figure 4  
Forward Current Derating – Per Leg

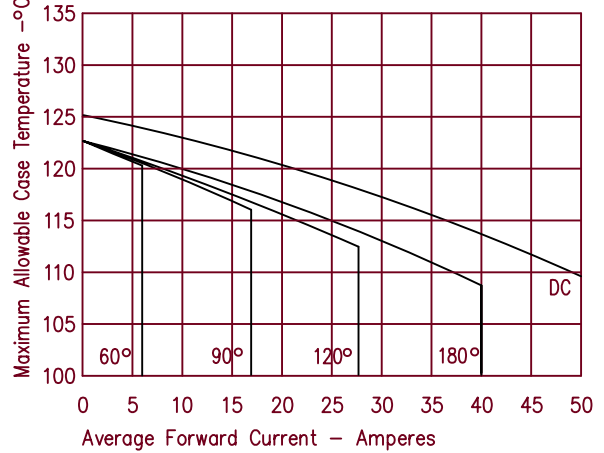


Figure 2  
Typical Reverse Characteristics – Per Leg

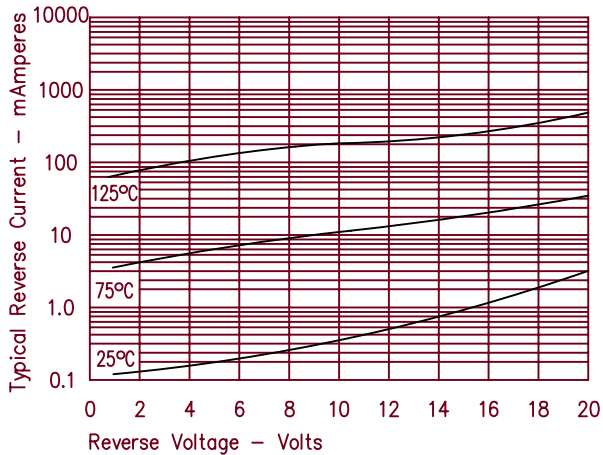


Figure 5  
Maximum Forward Power Dissipation – Per Leg

