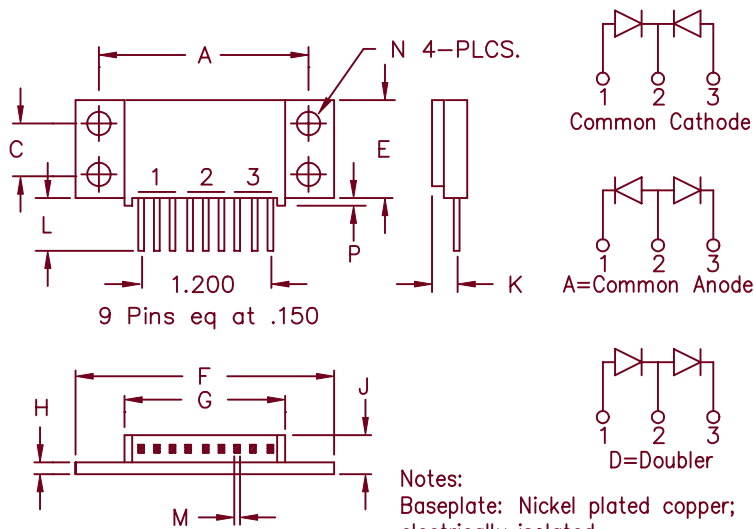


# Schottky Powermod FST15380 — FST153100



Notes:  
Baseplate: Nickel plated copper;  
electrically isolated  
Pins: Nickel plated copper

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.995	2.005	50.67	50.93	
C	0.495	0.506	12.57	12.83	
E	0.990	1.010	25.15	25.65	
F	2.390	2.410	60.71	61.21	
G	1.490	1.510	37.85	38.35	
H	0.120	0.130	3.05	3.30	
J	---	0.400	---	10.16	
K	0.240	0.260	6.10	6.60	to Lead $\varnothing$
L	0.490	0.510	12.45	12.95	
M	0.040	.050	1.02	1.27	Square Dia
N	0.175	0.195	4.45	4.95	
P	0.032	0.052	0.81	1.32	

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST15380*	153CMQ080	80V	80V
FST15390*		90V	90V
FST153100*	153CMQ100	100V	100V

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

- Schottky barrier rectifier
- Guard ring for reverse protection
- VRRM – 80 to 100 Volts
- High surge capacity
- Reverse energy tested
- Electrically isolated baseplate

Electrical Characteristics		
Average forward current per pkg	I <sub>F(AV)</sub> 150 Amps	T <sub>C</sub> = 120°C, Square wave, R $\theta$ JC = 0.5°C/W
Average forward current per leg	I <sub>F(AV)</sub> 75 Amps	T <sub>C</sub> = 120°C, Square wave, R $\theta$ JC = 1.0°C/W
Maximum surge current per leg	I <sub>FSM</sub> 1200 Amps	8.3 ms, half sine T <sub>J</sub> = 175°C
Max repetitive peak reverse current per leg	I <sub>R(OV)</sub> 2 Amps	f = 1 KHz, 25°C, 1 $\mu$ sec Square wave
Max peak forward voltage per leg	V <sub>FM</sub> .72 Volts	I <sub>FM</sub> = 75A: T <sub>J</sub> = 125°C*
Max peak forward voltage per leg	V <sub>FM</sub> .94 Volts	I <sub>FM</sub> = 75A: T <sub>J</sub> = 25°C*
Max peak reverse current per leg	I <sub>RM</sub> 20 mA	VRRM, T <sub>J</sub> = 125°C*
Max peak reverse current per leg	I <sub>RM</sub> 1.5 mA	VRRM, T <sub>J</sub> = 25°C
Typical junction capacitance per leg	C <sub>J</sub> 1500 pF	V <sub>R</sub> = 5.0V, T <sub>J</sub> = 25°C

\*Pulse test: Pulse width 300  $\mu$ sec, Duty cycle 2%

Thermal and Mechanical Characteristics		
Storage temp range	T <sub>STG</sub>	-55°C to 175°C
Operating junction temp range	T <sub>J</sub>	-55°C to 175°C
Maximum thermal resistance per leg	R $\theta$ JC	1.0°C/W Junction to case
Maximum thermal resistance per pkg	R $\theta$ JC	0.5°C/W Junction to case
Typical thermal resistance (greased)	R $\theta$ CS	0.1°C/W Case to sink
Mounting torque		15 – 20 inch pounds maximum
Weight		2.5 ounces (71 grams) typical

# FST15380 — FST153100

Figure 1  
Typical Forward Characteristics — Per Leg

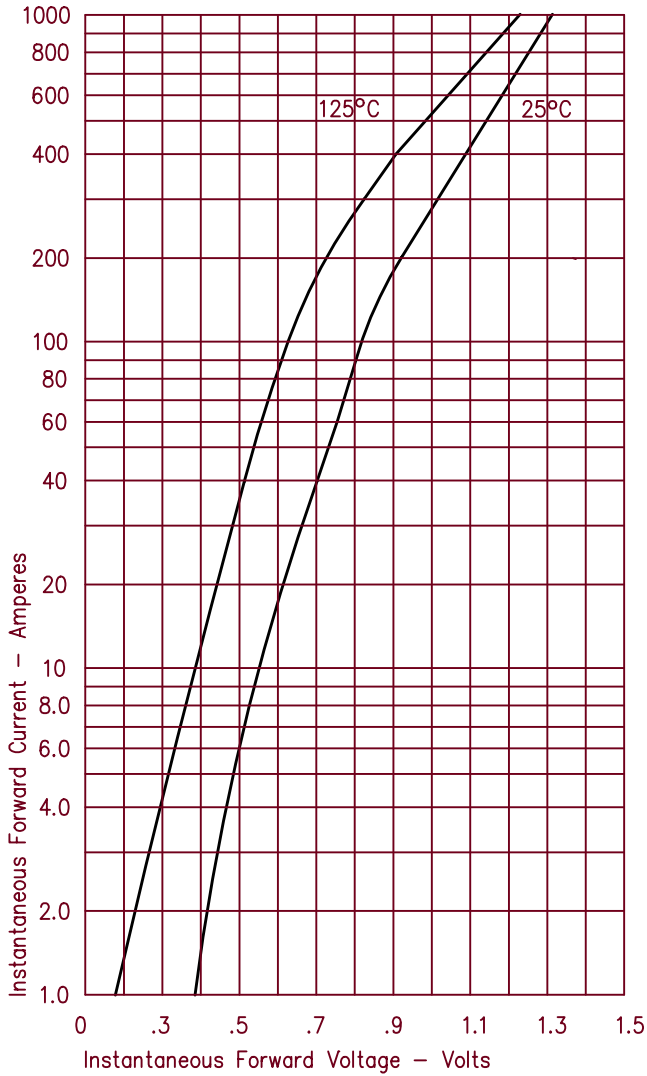


Figure 3  
Typical Junction Capacitance — Per Leg

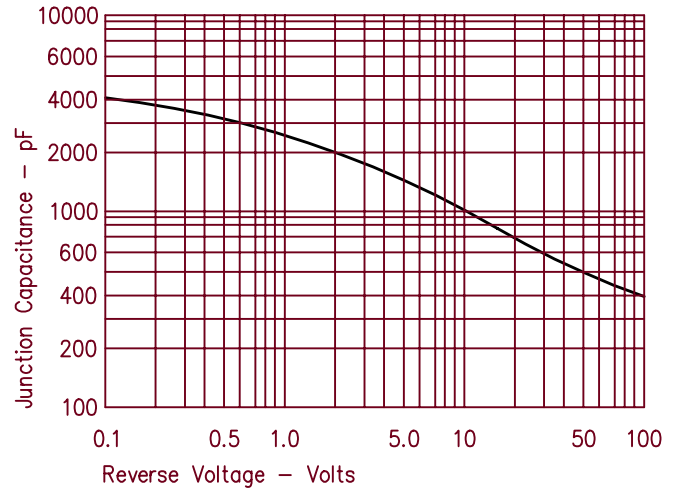


Figure 4  
Forward Current Derating — Per Leg

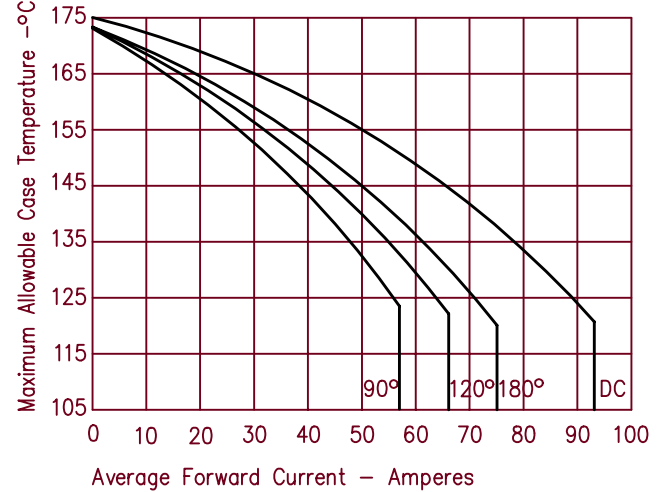
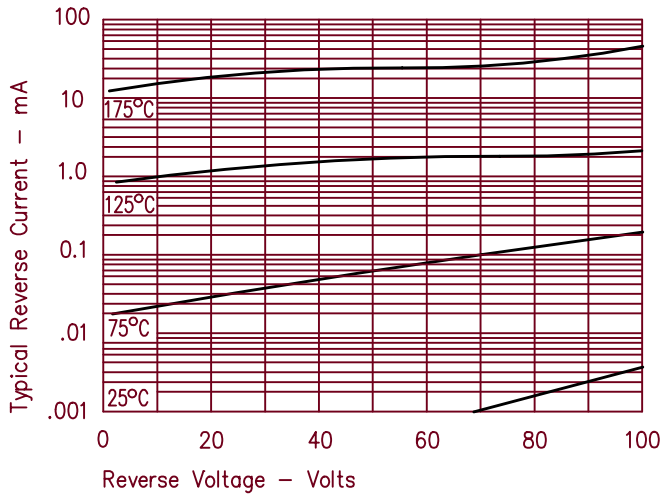


Figure 2  
Typical Reverse Characteristics — Per Leg





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