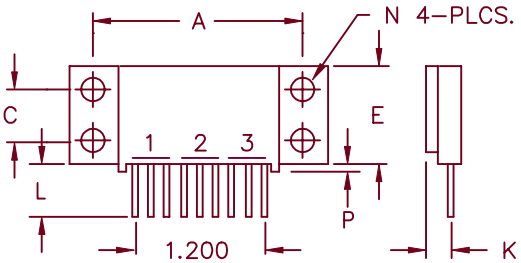
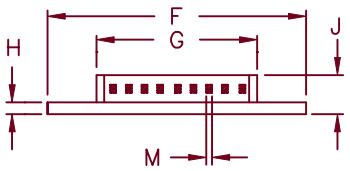
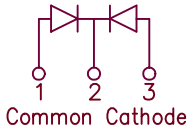
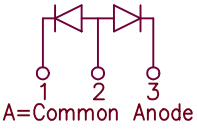
Schottky PowerMod

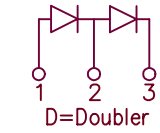
FST15230











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

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
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 ℄
L	0.490	0.510	12.45	12.95	
M	0.040	.050	1.02	1.27	Square
N	0.175	0.195	4.45	4.95	Dia
P	0.032	0.052	0.81	1.32	

Microsemi Catalog Number	Industry Part No.	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST15230*	152CMQ030	30V	30V

*Add Suffix A for Common Anode, D for Doubler

- Schottky Barrier Rectifier
- Guard Ring for Reverse Protection
- Low forward voltage
- V_{RRM} 30 Volts
- Electrically isolated base
- Reverse Energy Tested
- Center tap

Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 150 Amps	T_C = 85°C, Square wave, $R_{\theta JC}$ = 0.5°C/W
Average forward current per leg	$I_{F(AV)}$ 75 Amps	T_C = 85°C, Square wave, $R_{\theta JC}$ = 1.0°C/W
Maximum surge current per leg	I_{FSM} 1000 Amps	8.3 ms, half sine T_J = 150°C
Max repetitive peak reverse current per leg	$I_{R(OV)}$ 2 Amps	f = 1 KHz, 25°C, 1 µsec Square wave
Max peak forward voltage per leg	V_{FM} .54 Volts	I_{FM} = 75A: T_J = 125°C*
Max peak forward voltage per leg	V_{FM} .58 Volts	I_{FM} = 75A: T_J = 25°C*
Max peak reverse current per leg	I_{RM} 300 mA	V_{RRM}, T_J = 125°C*
Max peak reverse current per leg	I_{RM} 1 mA	V_{RRM}, T_J = 25°C
Typical junction capacitance per leg	C_J 2400 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 150°C
Max thermal resistance per leg	$R_{\theta JC}$	1.0°C/W Junction to case
Max 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
Weight		2.5 ounces (71 grams) typical

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7–18–01 Rev. 1

FST15230

Figure 1
Typical Forward Characteristics – Per Leg

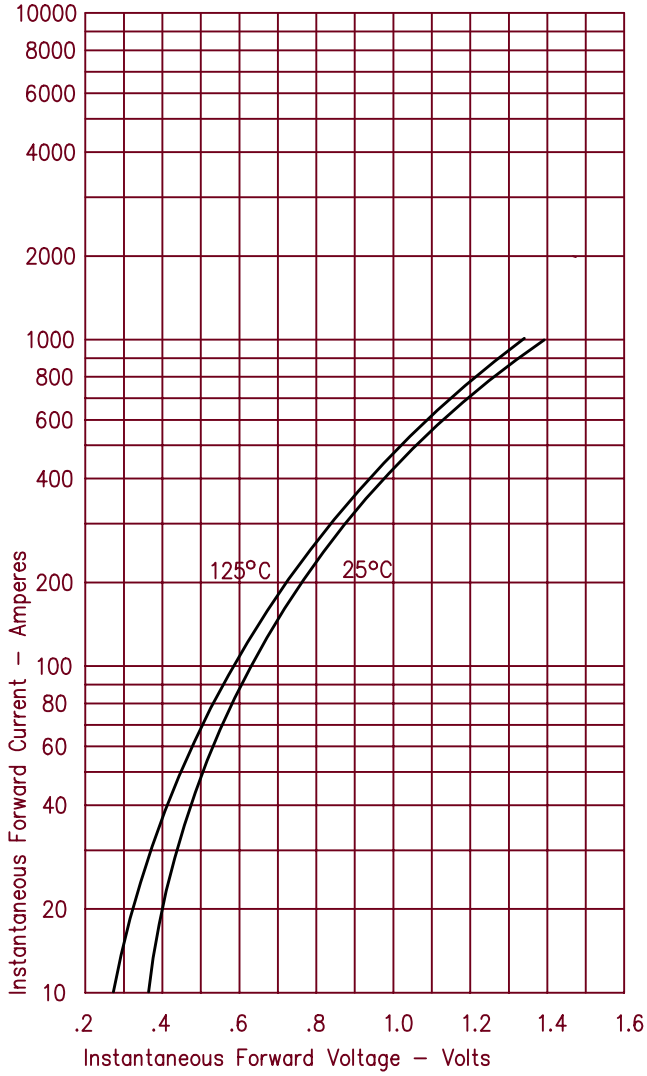


Figure 2
Typical Reverse Characteristics – Per Leg

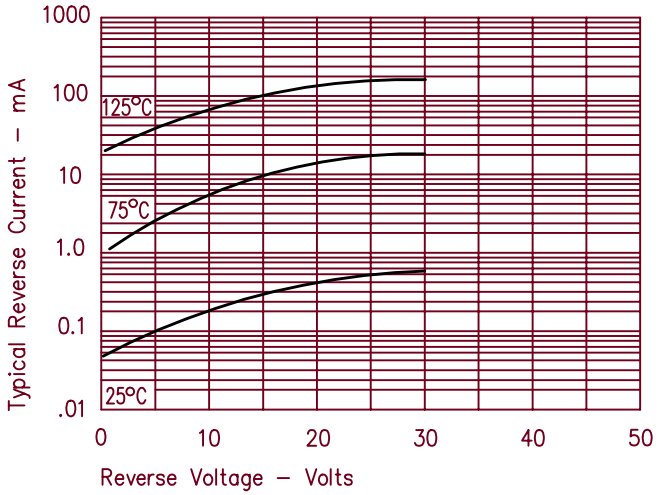


Figure 3
Typical Junction Capacitance – Per Leg

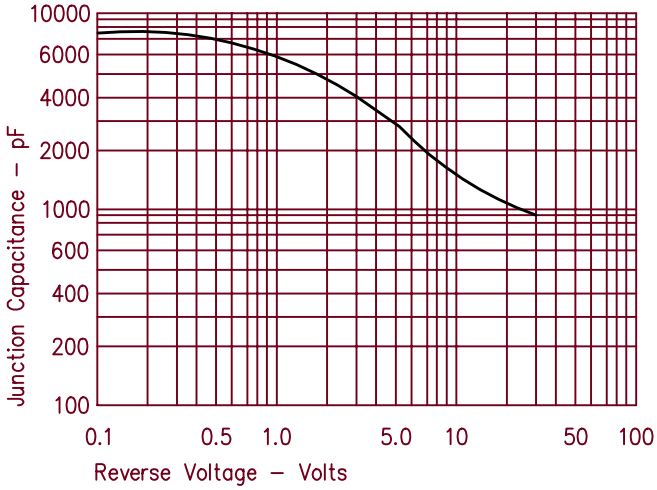
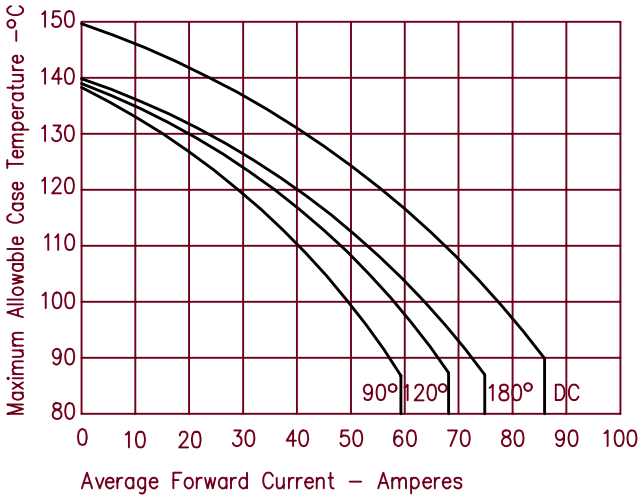


Figure 4
Forward Current Derating – Per Leg



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