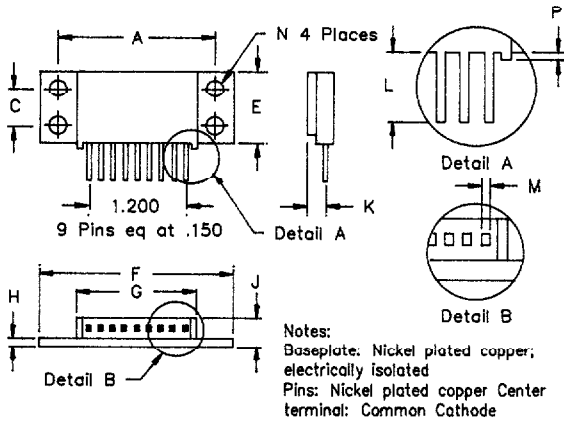


# Schottky PowerMod FST 101



Dim. Inches	Millimeter		Notes
	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	---
K	0.240	0.260	6.10 6.60 to Lead Cl
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

Notes:  
Baseplate: Nickel plated copper,  
electrically isolated  
Pins: Nickel plated copper Center  
terminal: Common Cathode

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST10125*	25V	25V
FST10130*	30V	30V
FST10135*	35V	35V
FST10140*	40V	40V
FST10145*	45V	45V

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

- Schottky Barrier Rectifier
- Guard Ring for Reverse Protection
- Low forward voltage
- VRRM 20 to 45 Volts
- Electrically isolated base
- Reverse Energy Tested
- Center tap

### Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 100 Amps	$T_C = 85^\circ\text{C}$ , Square wave, $R_{\theta JC} = 0.5^\circ\text{C/W}$
Average forward current per leg	$I_{F(AV)}$ 50 Amps	$T_C = 85^\circ\text{C}$ , Square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
Maximum surge current per leg	$I_{FSM}$ 1000 Amps	8.3 ms, half sine $T_J = 175^\circ\text{C}$
Max repetitive peak reverse current per leg	$I_{R(OV)}$ 2 Amps	$f = 1 \text{ kHz}$ , $25^\circ\text{C}$ , 1 $\mu\text{sec}$ Square wave
Max peak forward voltage per leg	$V_{FM}$ .48 Volts	$I_{FM} = 50\text{A}$ ; $T_J = 125^\circ\text{C}^*$
Max peak forward voltage per leg	$V_{FM}$ .53 Volts	$I_{FM} = 50\text{A}$ ; $T_J = 25^\circ\text{C}^*$
Max peak reverse current per leg	$I_{RM}$ 600 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max peak reverse current per leg	$I_{RM}$ 2 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical reverse current per leg	$I_{RM}$ 550 $\mu\text{A}$	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance	$C_J$ 2700 pF	$V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$

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

### Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-40^\circ\text{C}$ to $125^\circ\text{C}$
Operating junction temp range	$T_J$	$-40^\circ\text{C}$ to $125^\circ\text{C}$
Max thermal resistance per leg	$R_{\theta JC}$	$1.0^\circ\text{C/W}$ Junction to case
per package	$R_{\theta JC}$	$0.5^\circ\text{C/W}$ Junction to case
Max thermal resistance per leg	$R_{\theta JC}$	$0.9^\circ\text{C/W}$ Junction to case
Typical thermal resistance	$R_{\theta CS}$	$0.1^\circ\text{C/W}$ Case to sink
Max mounting torque		15-20 inch pounds maximum
Weight		2.5 ounces (71 grams) typical

**Microsemi Corp.**  
**Colorado**

# FST 101



Figure 1  
Typical Forward Characteristics - Per Leg

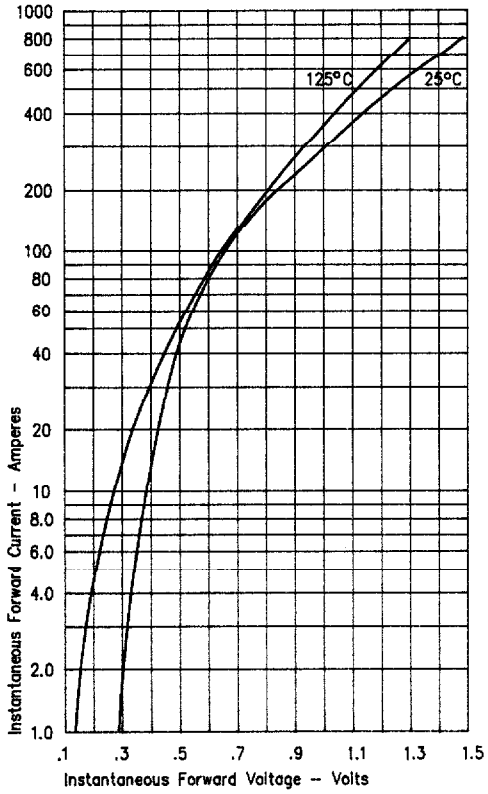


Figure 3  
Typical Junction Capacitance - Per Leg

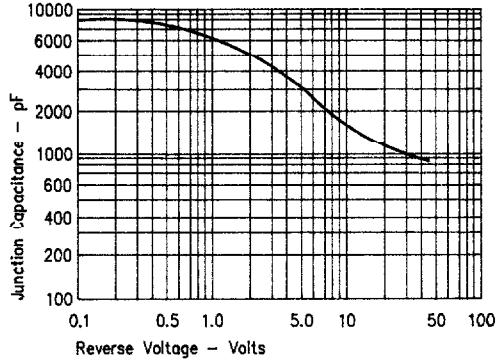


Figure 4  
Forward Current Derating - Per Leg

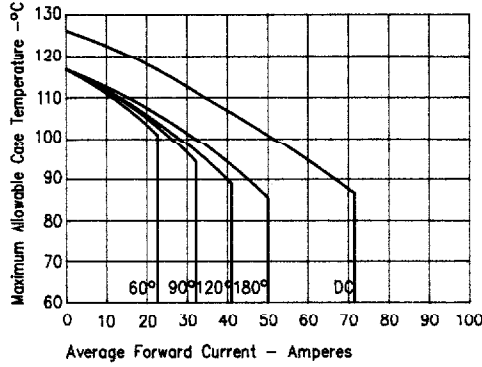


Figure 2  
Typical Reverse Characteristics - Per Leg

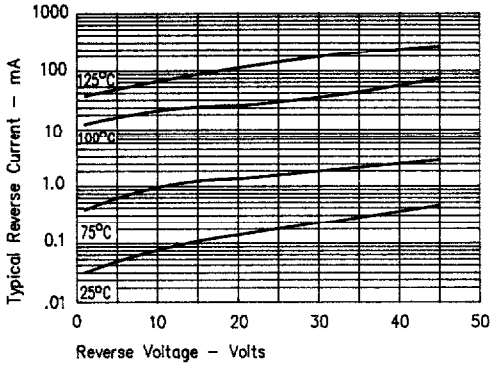


Figure 5  
Maximum Forward Power Dissipation - Per Leg

