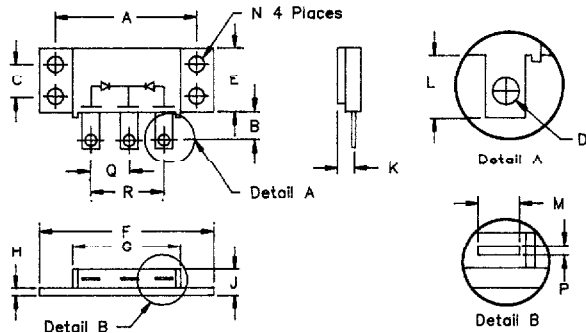


# Low Vf Schottky Powermod FST19035 — FST19050



TO-249

Dim. Inches		Millimeters		Notes	
Min.	Max.	Min.	Max.		
A	1.995	2.005	50.67	50.93	
B	0.300	0.325	7.62	8.26	
C	0.495	0.505	12.57	12.83	
D	0.182	0.192	4.62	4.88	Dia.
E	0.990	1.010	25.15	25.65	
F	2.390	2.410	60.71	61.21	
G	1.500	1.525	38.10	38.70	
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 Cl	
L	0.490	0.510	12.45	12.95	
M	0.330	0.350	8.38	6.90	
N	0.175	0.195	4.45	4.95	Dia.
P	0.035	0.045	0.89	1.14	
Q	0.445	0.455	11.30	11.56	
R	0.890	0.910	22.61	23.11	

Microsemi Catalog Number	Working Peak Peak Reverse Voltage	Repetitive Peak Peak Reverse Voltage
FST19035	35V	35V
FST19040	40V	40V
FST19045	45V	45V
FST19050	50V	50V

- Guard Ring Protection
- Electrically Isolated Base
- Center Tap
- Schottky Barrier Rectifier
- Low Forward Voltage
- Reverse Energy Tested
- $V_{RRM}$  35 to 50 Volts

### Electrical Characteristics

Average Forward Current per pkg.	$I_F(AV)$ 200 Amps	$T_C = 126^\circ C$ , Square wave, $R_{\theta JC} = 0.35^\circ C/W$
Average Forward Current per leg	$I_F(AV)$ 100 Amps	$T_C = 126^\circ C$ , Square wave, $R_{\theta JC} = 0.7^\circ C/W$
Maximum Surge Current per leg	$I_{FSM}$ 1500 Amps	8.5ms, half sine, $I_J = 175^\circ C$
Max. Peak Forward Voltage per leg	$V_{FM}$ .55 Volts	$I_{FM} = 100A, T_J = 175^\circ C^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ .70 Volts	$I_{FM} = 100A, T_J = 25^\circ C^*$
Max. Peak Forward Current per leg	$I_{RM}$ 100 mA	$V_{RRM}, T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 4 mA	$V_{RRM}, T_J = 25^\circ C$
Typical Junction Capacitance	$C_J$ 4800 pF	$VR = 5.0V, T_J = 25^\circ C$

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

### Thermal and Mechanical Characteristics

Storage temp range	$I_{STG}$	$-40^\circ C$ to $175^\circ C$
Operating junction temp range	$T_J$	$-40^\circ C$ to $175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$0.7^\circ C/W$ Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	$0.35^\circ C/W$
Typical thermal resistance per leg	$R_{\theta JC}$	$0.6^\circ C/W$
Typical thermal resistance	$R_{\theta JC}$	$0.1^\circ C/W$ Case to sink
Typical Weight		2.3 ounces (58.5 grams) typical
Mounting Torque		15-20 inch pounds maximum

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

# FST19035 - FST19050



Figure 1  
Typical Forward Characteristics - Per Leg

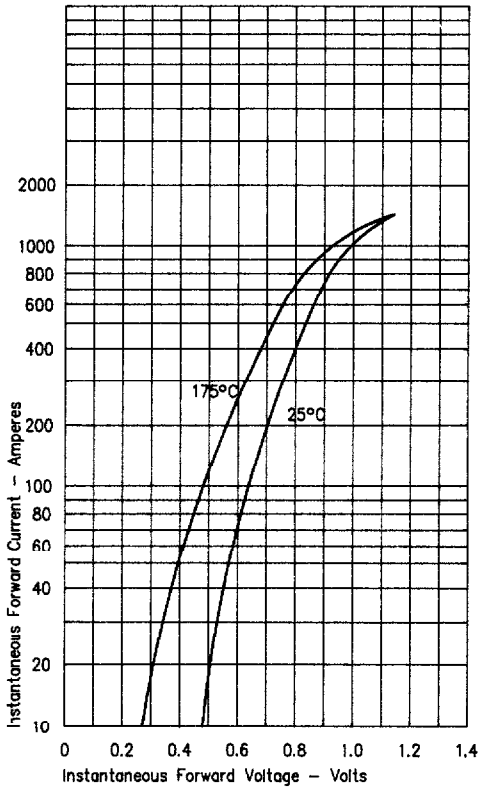


Figure 3  
Typical Junction Capacitance - Per Leg

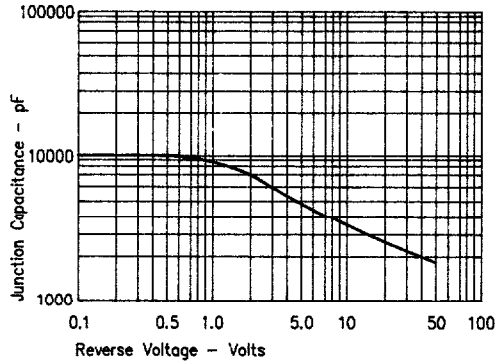


Figure 4  
Forward Current Derating - Per Leg

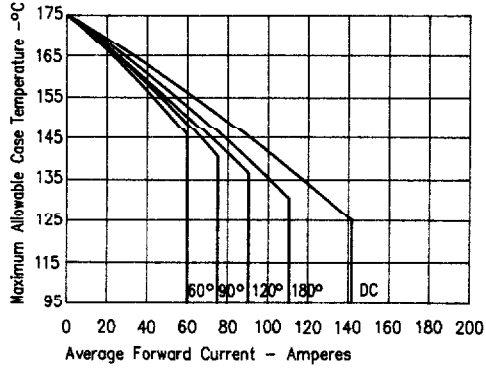


Figure 2  
Typical Reverse Characteristics - Per Leg

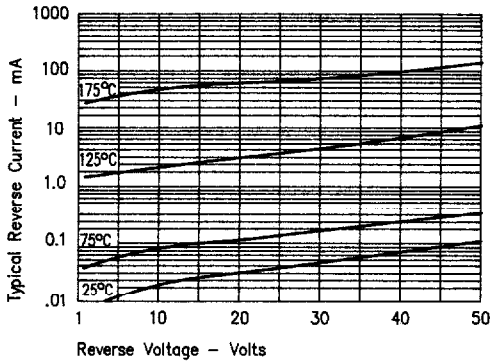


Figure 5  
Maximum Forward Power Dissipation - Per Leg

