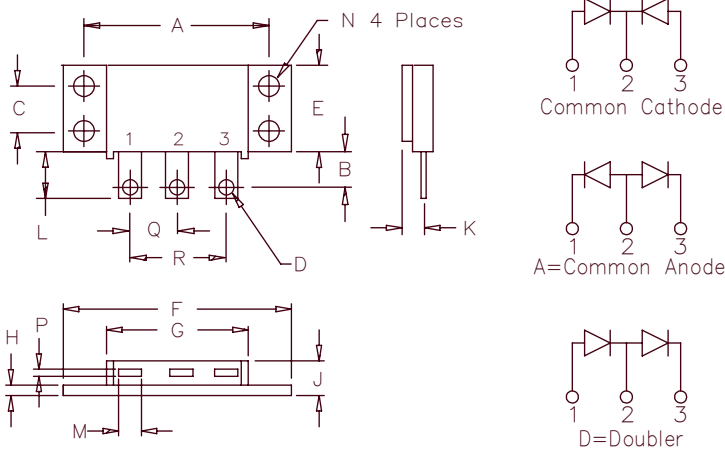


# Low Vf Schottky Powermod FST19035 — FST19050



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

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 $\phi$
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	

## TO-249

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

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

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

## Electrical Characteristics

Average Forward Current per pkg.	$I_{F(AV)}$ 200 Amps	$T_C = 136^\circ\text{C}$ , Square wave, $R_{\theta JC} = 0.35^\circ\text{C/W}$
Average Forward Current per leg	$I_{F(AV)}$ 100 Amps	$T_C = 136^\circ\text{C}$ , Square wave, $R_{\theta JC} = 0.7^\circ\text{C/W}$
Maximum Surge Current per leg	$I_{FSM}$ 1500 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Max. Peak Forward Voltage per leg	$V_{FM}$ .55 Volts	$I_{FM} = 100\text{A}$ , $T_J = 175^\circ\text{C}^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ .70 Volts	$I_{FM} = 100\text{A}$ , $T_J = 25^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 100 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 4 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical Junction Capacitance per leg	$C_J$ 4800 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	$T_{STG}$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Operating junction temp range	$T_J$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Max thermal resistance per leg	$R_{\theta JC}$	$0.7^\circ\text{C/W}$ Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	$0.35^\circ\text{C/W}$
Typical thermal resistance (greased)	$R_{\theta JC}$	$0.1^\circ\text{C/W}$ Case to sink
Mounting Torque		15–20 inch pounds
Weight		2.3 ounces (58.5 grams) typical

# FST19035 – FST19050

Figure 1  
Typical Forward Characteristics – Per Leg

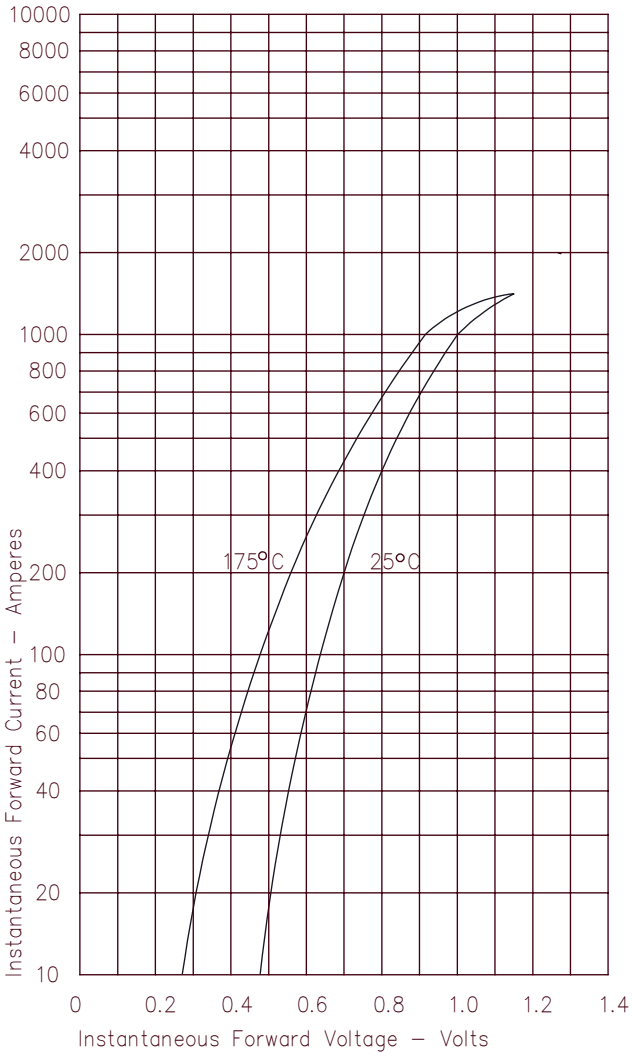


Figure 3  
Typical Junction Capacitance – Per Leg

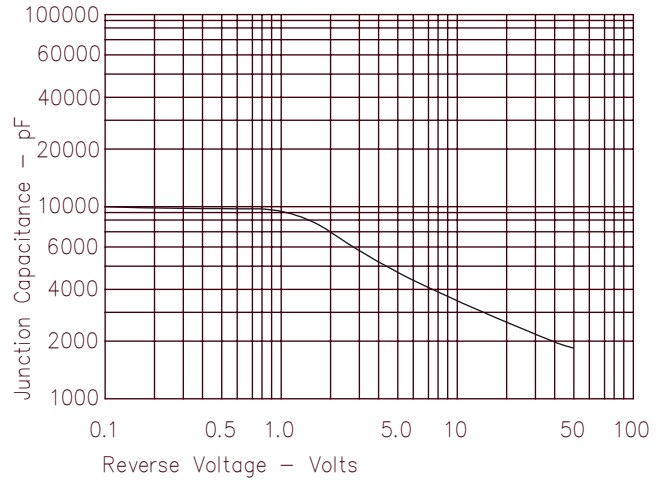


Figure 4  
Forward Current Derating – Per Leg

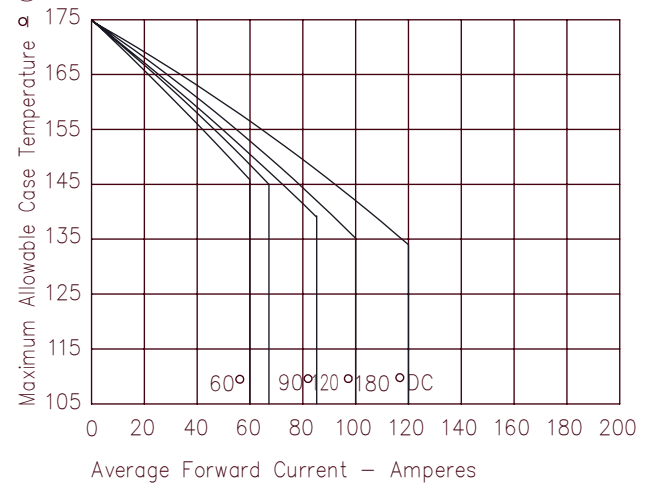


Figure 2  
Typical Reverse Characteristics – Per Leg

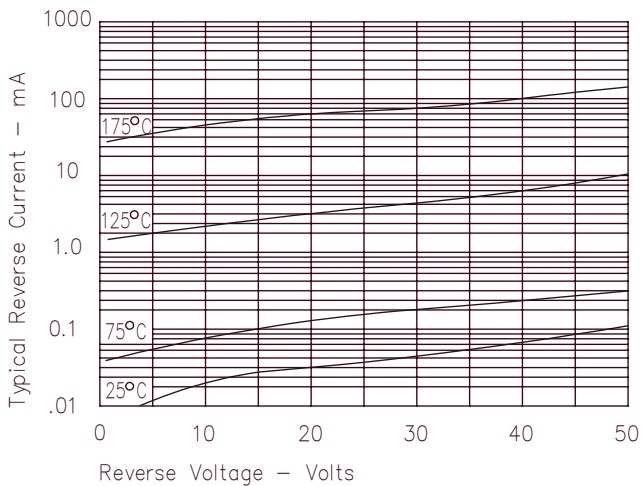


Figure 5  
Maximum Forward Power Dissipation – Per Leg

