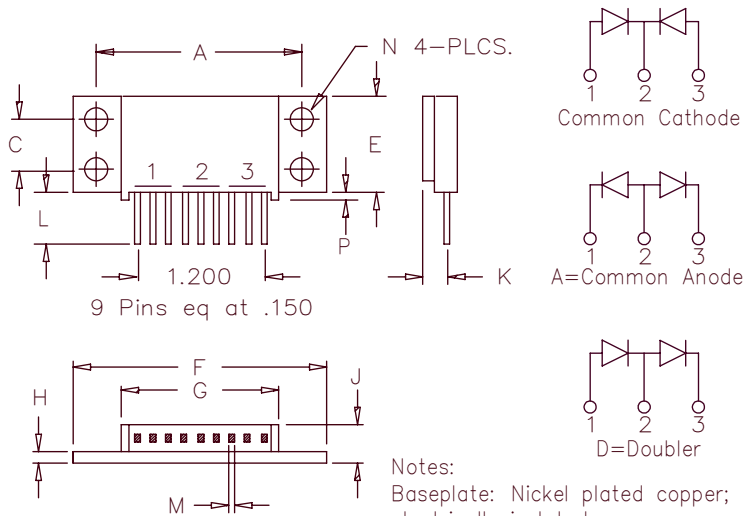


# Schottky PowerMod FST10135 — FST10145



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
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

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
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 35 to 45 Volts
- Electrically isolated base
- Reverse Energy Tested
- Center tap
- ROHS Compliant

## 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	$R(OV)$ 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	$R_M$ 600 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max peak reverse current per leg	$R_M$ 2 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance per leg	$C_J$ 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	$T_{STG}$	-55 $^\circ\text{C}$ to 175 $^\circ\text{C}$
Operating junction temp range	$T_J$	-55 $^\circ\text{C}$ to 125 $^\circ\text{C}$
Max thermal resistance per leg	$R_{\theta JC}$	1.0 $^\circ\text{C/W}$ Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	0.5 $^\circ\text{C/W}$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.1 $^\circ\text{C/W}$ Case to sink
Mounting torque		15–20 inch pounds
Weight		2.5 ounces (71 grams) typical

# FST10135 – FST10145

Figure 1  
Typical Forward Characteristics – Per Leg

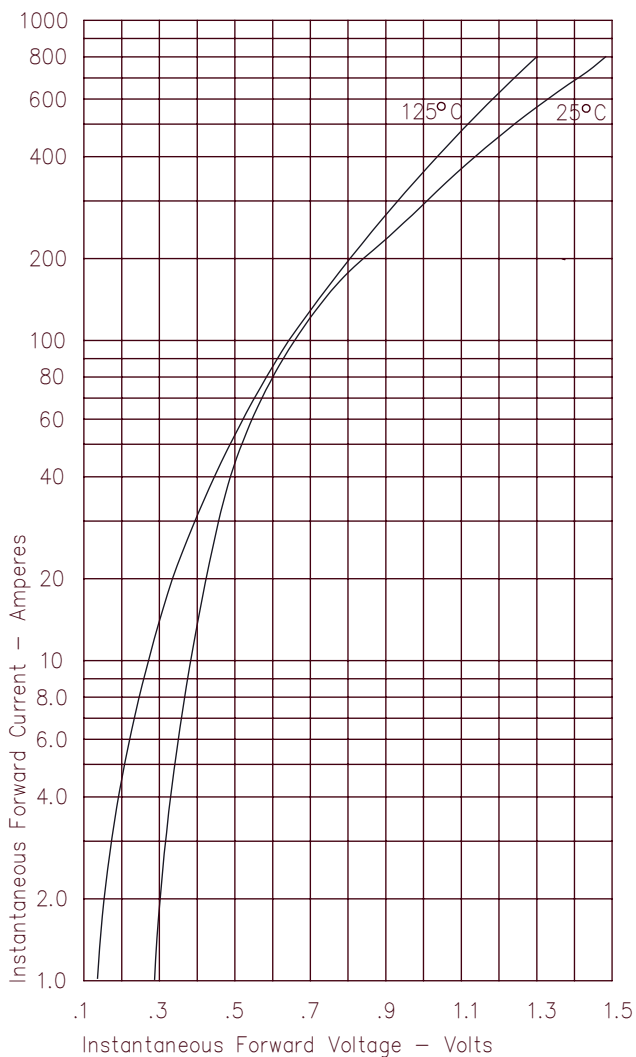


Figure 3  
Typical Junction Capacitance – Per Leg

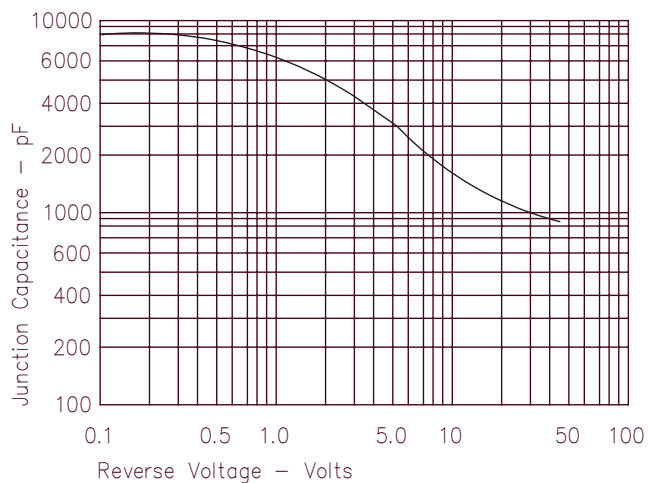


Figure 4  
Forward Current Derating – Per Leg

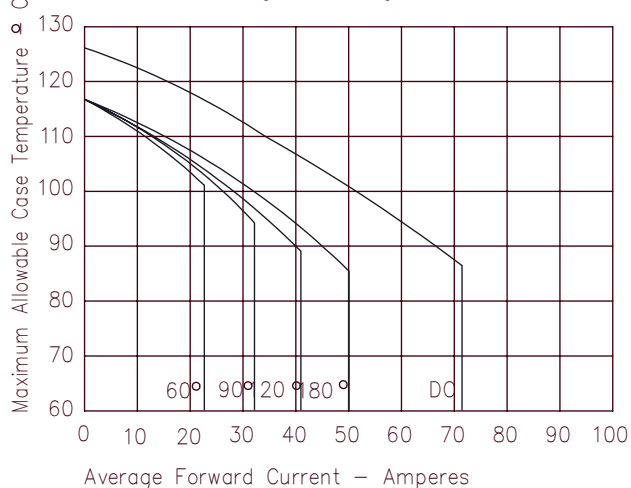


Figure 2  
Typical Reverse Characteristics – Per Leg

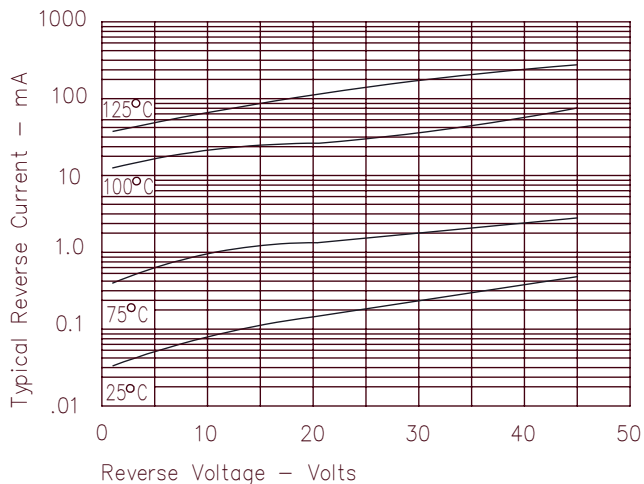


Figure 5  
Maximum Forward Power Dissipation – Per Leg

