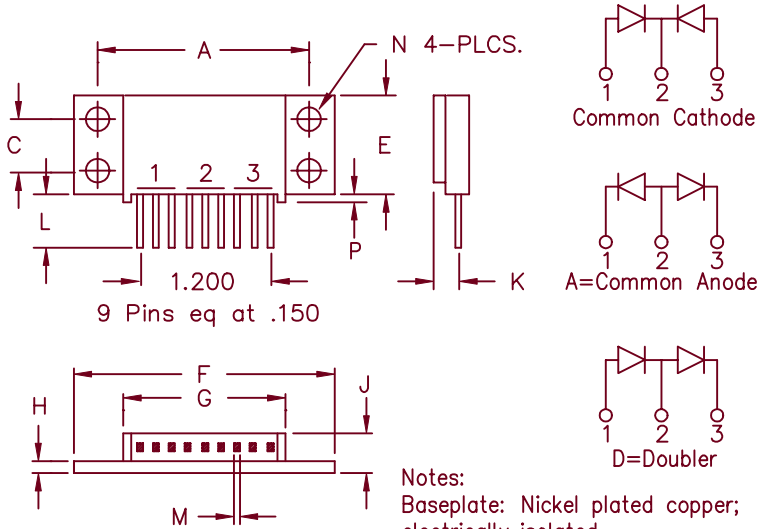


# Schottky Powermod FST6035 — FST6050



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 Dia
N	0.175	0.195	4.45	4.95	
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
FST6035*	35V	35V
FST6040*	40V	40V
FST6045*	45V	45V
FST6050*	50V	50V

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

- Schottky Barrier Rectifier
- Guard Ring for Reverse Protection
- $V_{RRM}$  35 to 50 Volts
- High surge capacity
- Reverse Energy Tested

## Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 120 Amps	$T_C = 135^\circ\text{C}$ , square wave, $R_{\theta JC} = 0.6^\circ\text{C/W}$
Average forward current per leg	$I_{F(AV)}$ 60 Amps	$T_C = 135^\circ\text{C}$ , square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
Maximum surge current per leg	$I_{FSM}$ 1200 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Maximum repetitive 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	$V_{FM}$ 0.56 Volts	$I_{FM} = 60\text{A}$ ; $T_J = 175^\circ\text{C}^*$
Max peak forward voltage per leg	$V_{FM}$ 0.74 Volts	$I_{FM} = 60\text{A}$ ; $T_J = 25^\circ\text{C}^*$
Max peak reverse current per leg	$I_{RM}$ 30 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max peak reverse current per leg	$I_{RM}$ 1.5 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance per leg	$C_J$ 2300 pF	$V_R = 5.0\text{V}$ , $T_C = 25^\circ\text{C}$

\*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	$R_{\theta JC}$	$1.0^\circ\text{C/W}$ Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	$0.6^\circ\text{C/W}$ 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

# FST6035 — FST6050

Figure 1  
Typical Forward Characteristics — Per Leg

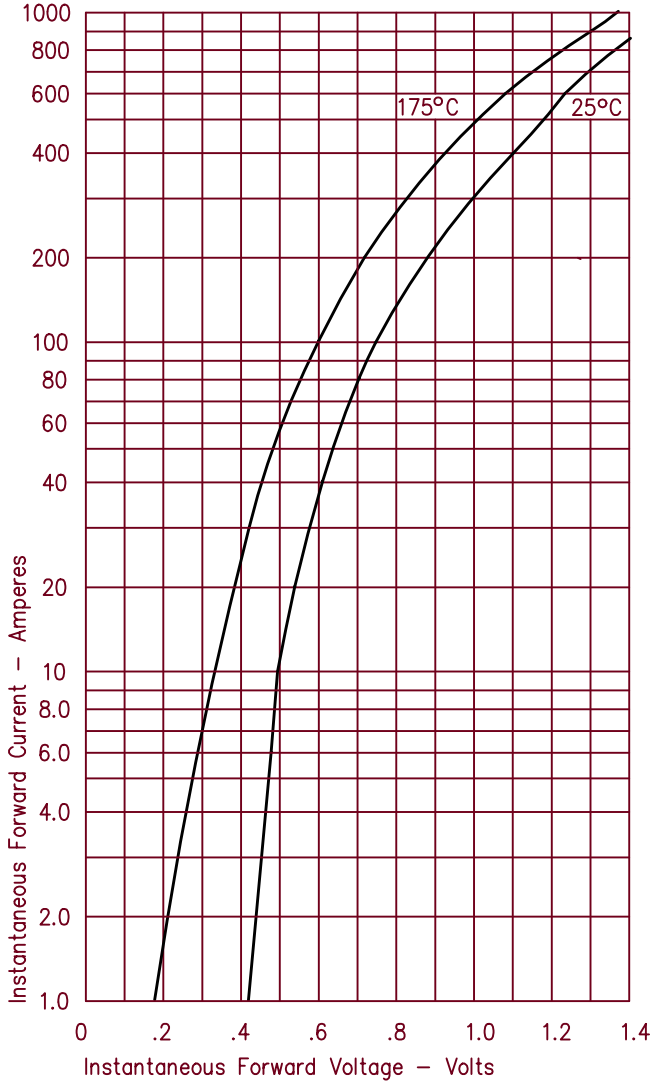


Figure 3  
Typical Junction Capacitance — Per Leg

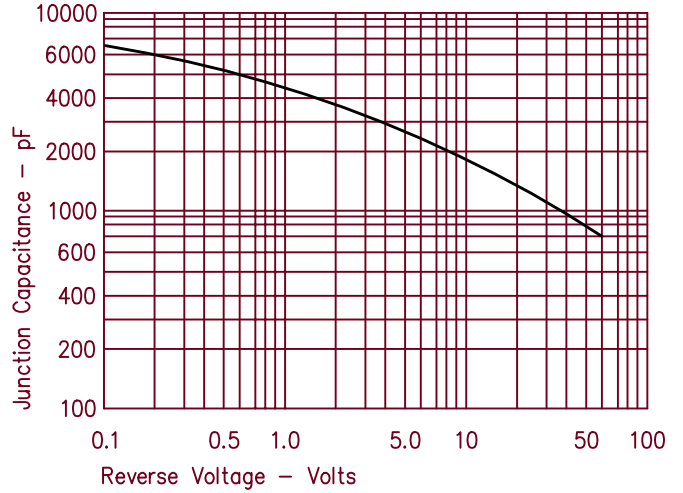


Figure 4  
Forward Current Derating — Per Leg

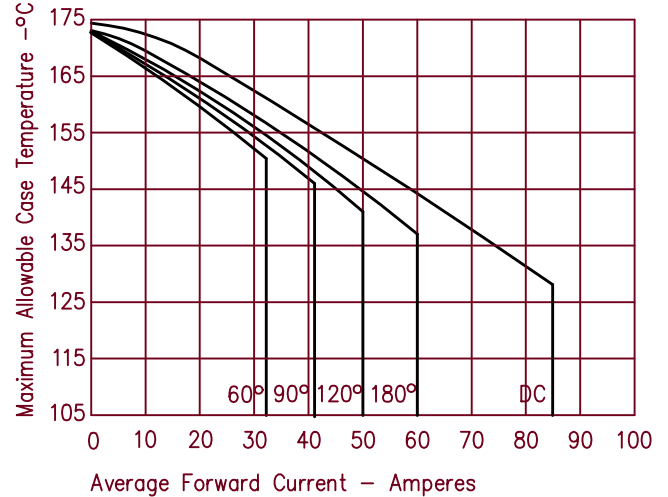


Figure 2  
Typical Reverse Characteristics — Per Leg

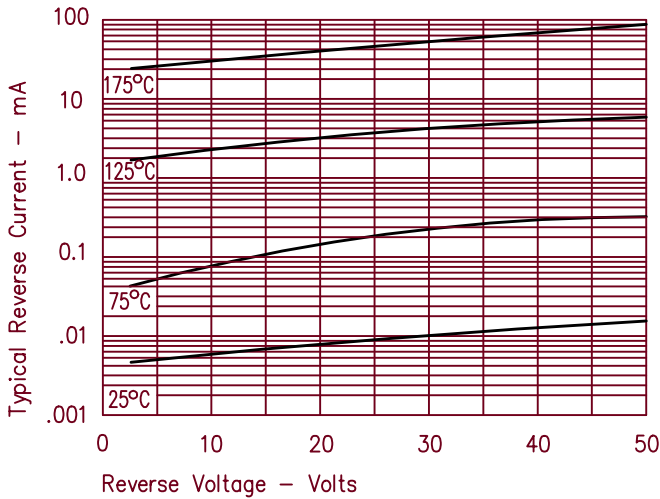
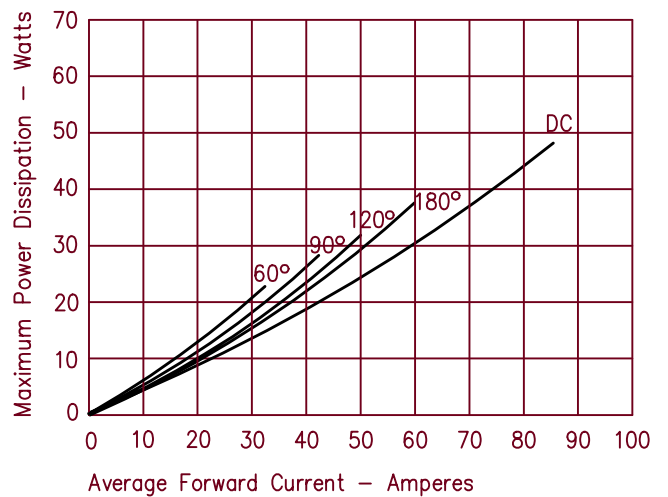


Figure 5  
Maximum Forward Power Dissipation — Per Leg





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