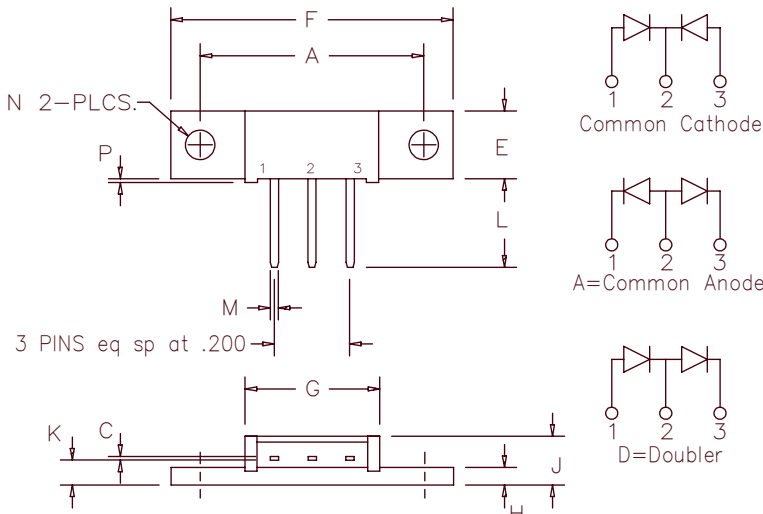


# Schottky MiniMod FST6435 — FST6450



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.180	1.195	29.97	30.35	
C	.025	.035	0.64	0.89	
E	.350	.370	8.89	9.40	
F	1.490	1.510	37.85	38.35	
G	.695	.715	17.65	18.16	
H	.088	.098	2.24	2.49	
J	.240	.260	6.10	6.60	
K	.115	.135	2.92	3.43	
L	.460	.480	11.68	12.19	
M	.034	.046	0.86	1.17	
N	.151	.161	3.84	4.09	Dia.
P	.015	.025	0.38	0.64	

Note: Baseplate Common with Pin 2

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST6435*	61CNQ035	35V	35V
FST6440*	61CNQ040	40V	40V
FST6445*	61CNQ045	45V	45V
FST6450*		50V	50V

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

- Schottky Barrier Rectifier
- Guard Ring Protection
- 2X30 Amperes avg.
- 175°C Junction Temperature
- Reverse Energy Tested
- $V_{RRM}$  — 35 to 50 Volts
- ROHS Compliant

## Electrical Characteristics

Average forward current per pkg	$I_{F(AV)}$ 60 Amps	$T_C = 156^\circ\text{C}$ , Square wave, $R_{\theta JC} = 0.5^\circ\text{C/W}$
Average forward current per leg	$I_{F(AV)}$ 30 Amps	$T_C = 156^\circ\text{C}$ , Square wave, $R_{\theta JC} = 1.0^\circ\text{C/W}$
Maximum surge current per leg	$I_{FSM}$ 800 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	$V_{FM}$ 0.46 Volts	$I_{FM} = 30\text{A}$ : $T_J = 175^\circ\text{C}^*$
Max peak forward voltage per leg	$V_{FM}$ 0.65 Volts	$I_{FM} = 30\text{A}$ : $T_J = 25^\circ\text{C}^*$
Max peak reverse current per leg	$I_{RM}$ 45 mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}^*$
Max reverse current per leg	$I_{RM}$ 2 mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance per leg	$C_J$ 1900 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	$R_{\theta JC}$	$0.5^\circ\text{C/W}$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.3^\circ\text{C/W}$ Case to sink
Mounting Base Torque		10 inch pounds maximum
Weight		0.3 ounce (8.4 grams) typical

# FST6435 — FST6450

Figure 1  
Typical Forward Characteristics — Per Leg

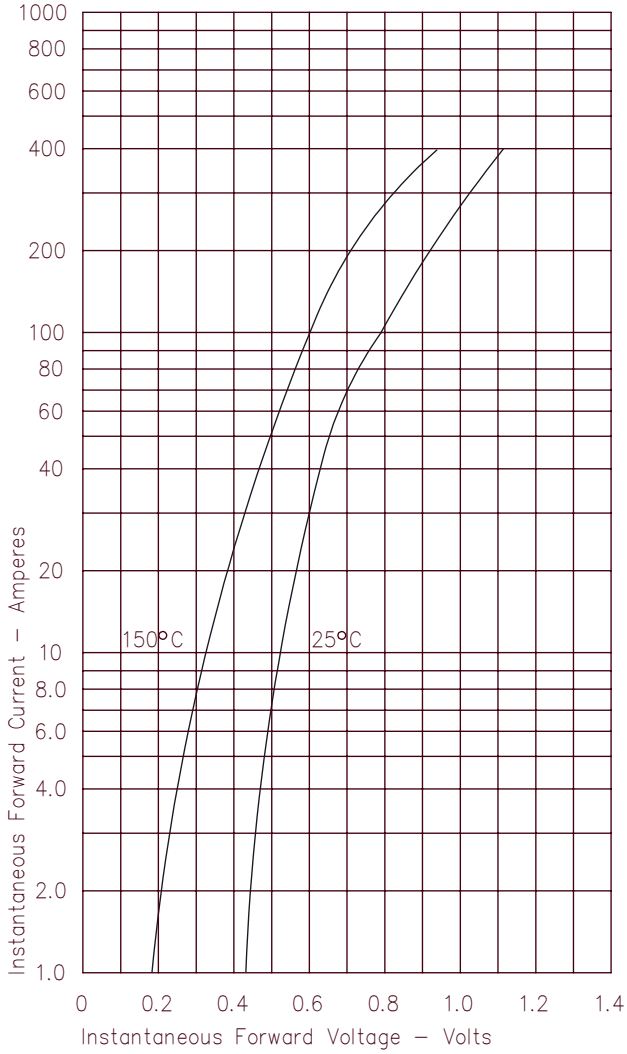


Figure 3  
Typical Junction Capacitance — Per Leg

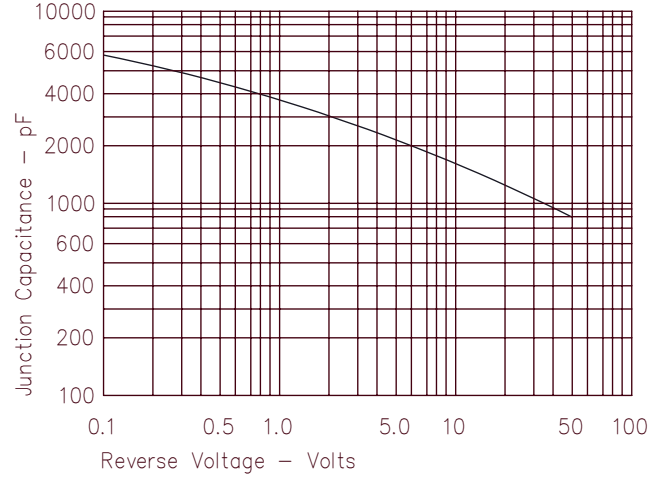


Figure 4  
Forward Current Derating — Per Leg

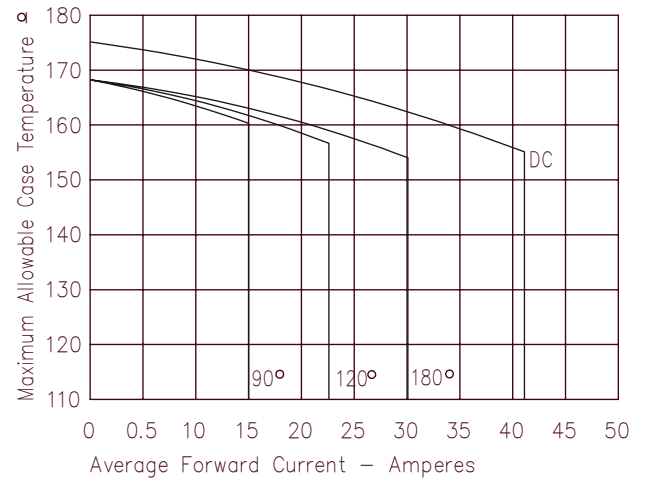


Figure 2  
Typical Reverse Characteristics — Per Leg

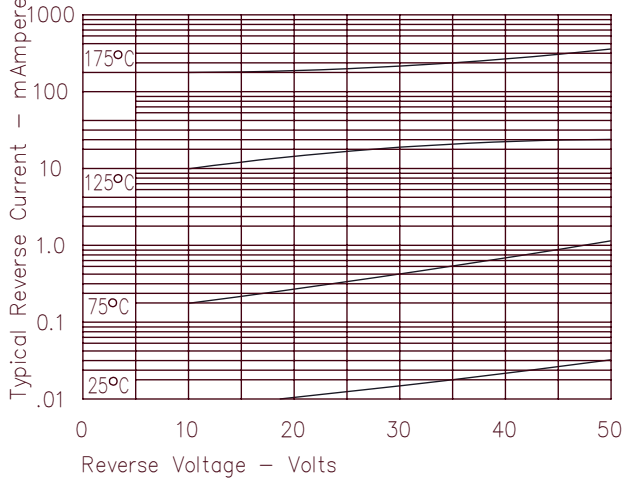


Figure 5  
Maximum Forward Power Dissipation — Per Leg

