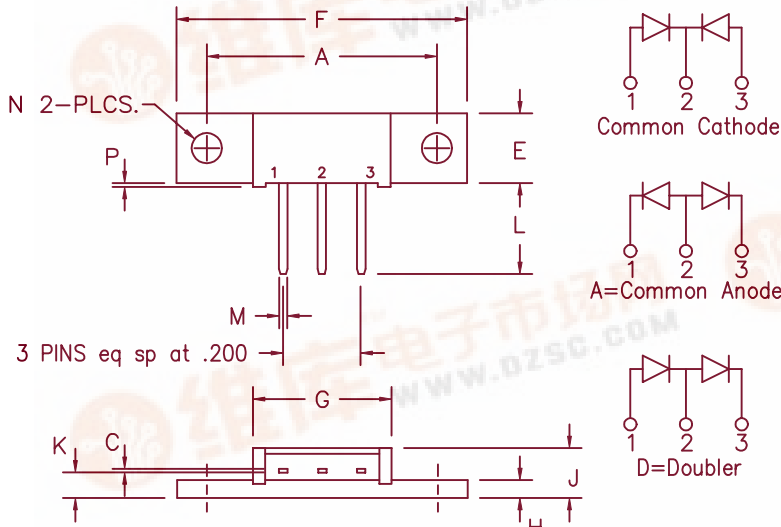


FST6435 — FST6445



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	

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
FST6435*	35V	35V
FST6440*	40V	40V
FST6445*	45V	45V

*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

Electrical Characteristics

Average forward current per pkg	$I_F(AV)$ 60 Amps	$T_C = 156^\circ C$, Square wave, $R_{\theta JC} = 0.5^\circ C/W$
Average forward current per leg	$I_F(AV)$ 30 Amps	$T_C = 156^\circ C$, Square wave, $R_{\theta JC} = 1.0^\circ C/W$
Maximum surge current per leg	I_{FSM} 800 Amps	8.3 ms, half sine, $T_J = 175^\circ C$
Max repetitive peak reverse current per leg	$I_R(OV)$ 2 Amps	$f = 1$ KHZ, $25^\circ C$, 1 usec square wave
Max peak forward voltage per leg	V_{FM} 0.46 Volts	$I_{FM} = 30A$: $T_J = 175^\circ C^*$
Max peak forward voltage per leg	V_{FM} 0.63 Volts	$I_{FM} = 30A$: $T_J = 25^\circ C^*$
Max peak reverse current per leg	I_{RM} 50 mA	V_{RRM} , $T_J = 125^\circ C^*$
Max reverse current per leg	I_{RM} 2 mA	V_{RRM} , $T_J = 25^\circ C$
Typical junction capacitance per leg	C_J 1900 pF	$V_R = 5.0V$, $T_C = 25^\circ C$

*Pulse test: Pulse width 300 usec, Duty cycle 2%

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	$-55^\circ C$ to $175^\circ C$
Operating junction temp range	T_J	$-55^\circ C$ to $175^\circ C$
Max thermal resistance per leg	$R_{\theta JC}$	$1.0^\circ C/W$ Junction to case
Max thermal resistance per pkg	$R_{\theta JC}$	$0.5^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.3^\circ C/W$ Case to sink
Mounting Base Torque		10 inch pounds maximum
Weight		0.3 ounce (8.4 grams) typical



FST6435 — FST6445

Figure 1
Typical Forward Characteristics — Per Leg

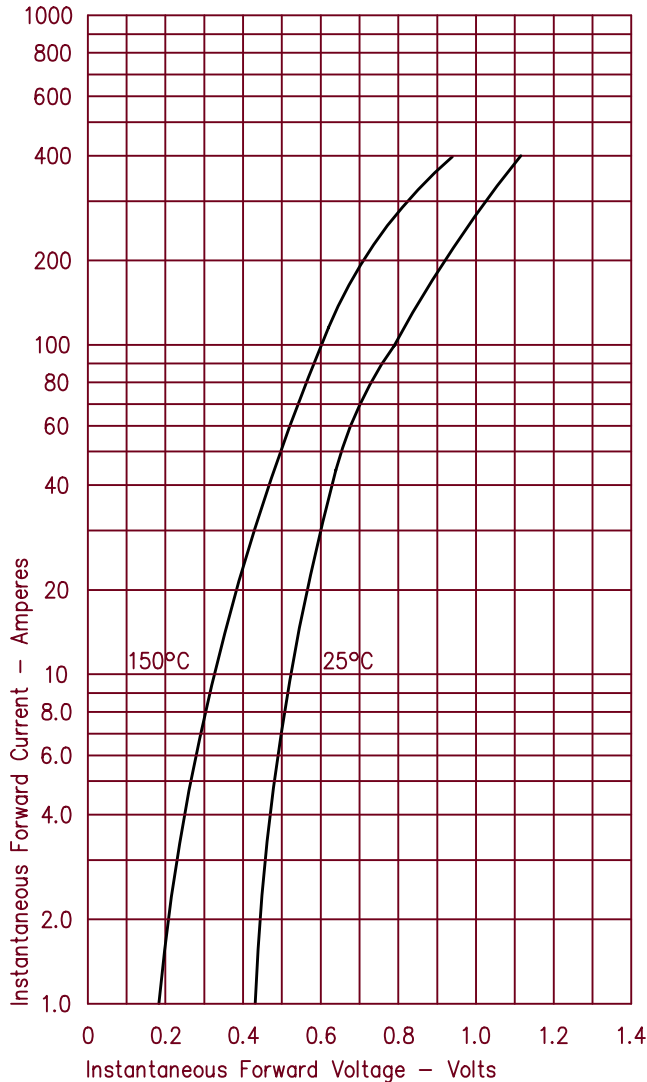


Figure 3
Typical Junction Capacitance — Per Leg

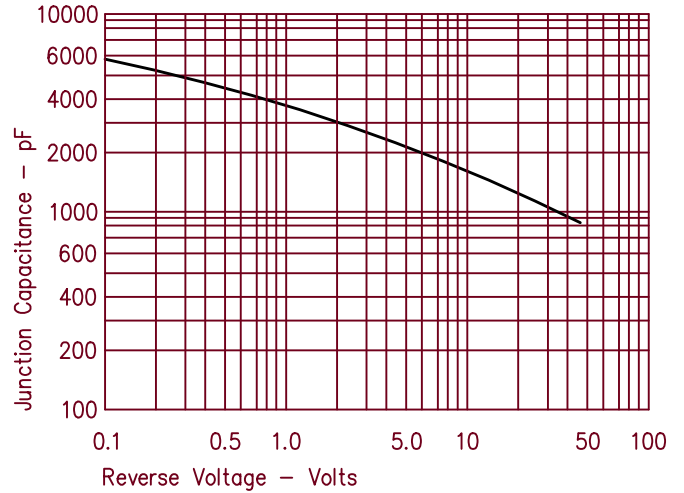


Figure 4
Forward Current Derating — Per Leg

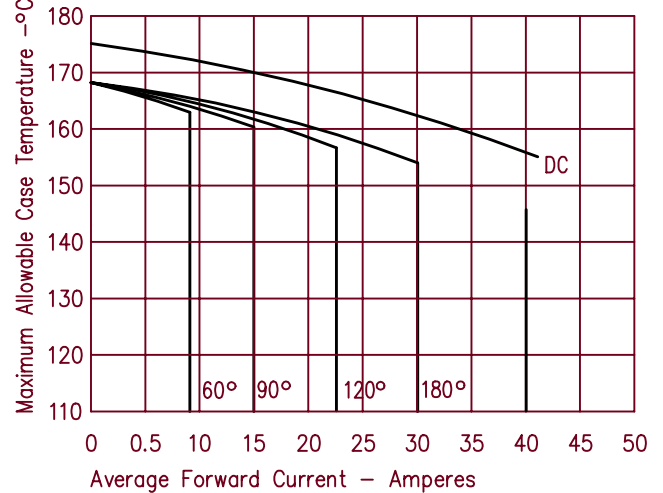


Figure 2
Typical Reverse Characteristics — Per Leg

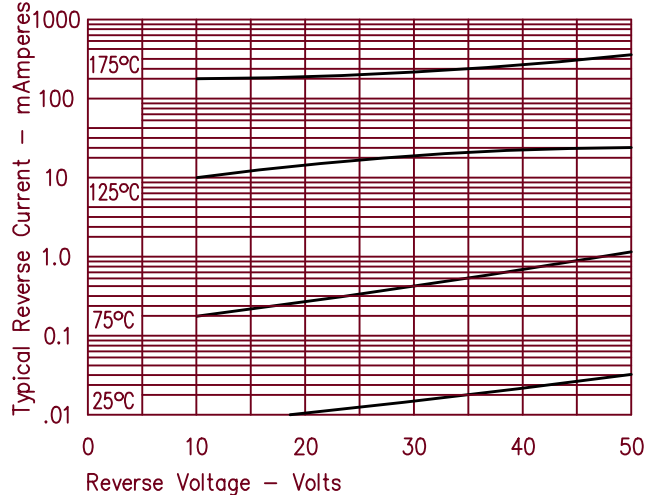


Figure 5
Maximum Forward Power Dissipation — Per Leg

