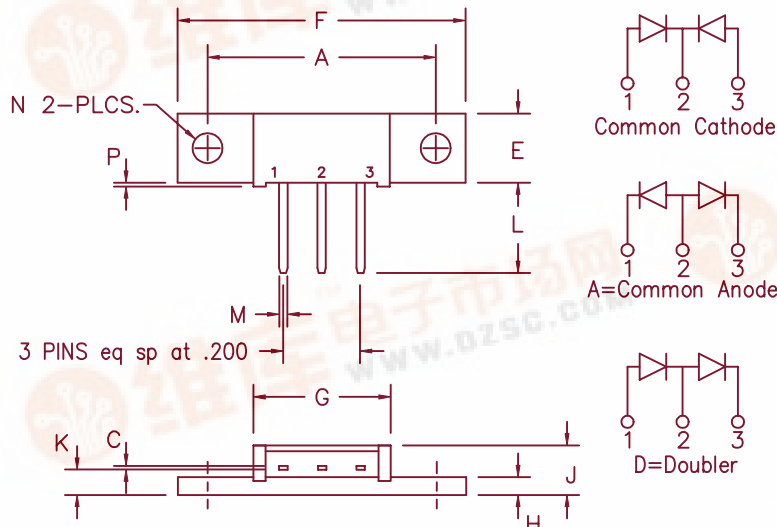


FST6435 — FST6450



Note: Baseplate Common with Pin 2

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	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
- VRRM - 35 to 50 Volts

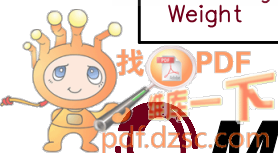
Electrical Characteristics

Average forward current per pkg	I _{F(AV)} 60 Amps	T _C = 156°C, Square wave, R _{θJC} = 0.5°C/W
Average forward current per leg	I _{F(AV)} 30 Amps	T _C = 156°C, Square wave, R _{θJC} = 1.0°C/W
Maximum surge current per leg	I _{FSM} 800 Amps	8.3 ms, half sine, T _J = 175°C
Max repetitive peak reverse current per leg	I _{R(OV)} 2 Amps	f = 1 KHZ, 25°C, 1 usec square wave
Max peak forward voltage per leg	V _{FM} 0.46 Volts	I _{FM} = 30A: T _J = 175°C*
Max peak forward voltage per leg	V _{FM} 0.65 Volts	I _{FM} = 30A: T _J = 25°C*
Max peak reverse current per leg	I _{RM} 45 mA	V _{RRM} , T _J = 125°C*
Max reverse current per leg	I _{RM} 2 mA	V _{RRM} , T _J = 25°C
Typical junction capacitance per leg	C _J 1900 pF	V _R = 5.0V, T _C = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T _{STG}	-55°C to 175°C
Operating junction temp range	T _J	-55°C to 175°C
Max thermal resistance per leg	R _{θJC}	1.0°C/W Junction to case
Max thermal resistance per pkg	R _{θJC}	0.5°C/W Junction to case
Typical thermal resistance (greased)	R _{θCS}	0.3°C/W Case to sink
Mounting Base Torque		10 inch pounds maximum
Weight		0.3 ounce (8.4 grams) typical



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FST6435 — FST6450

Figure 1
Typical Forward Characteristics — Per Leg

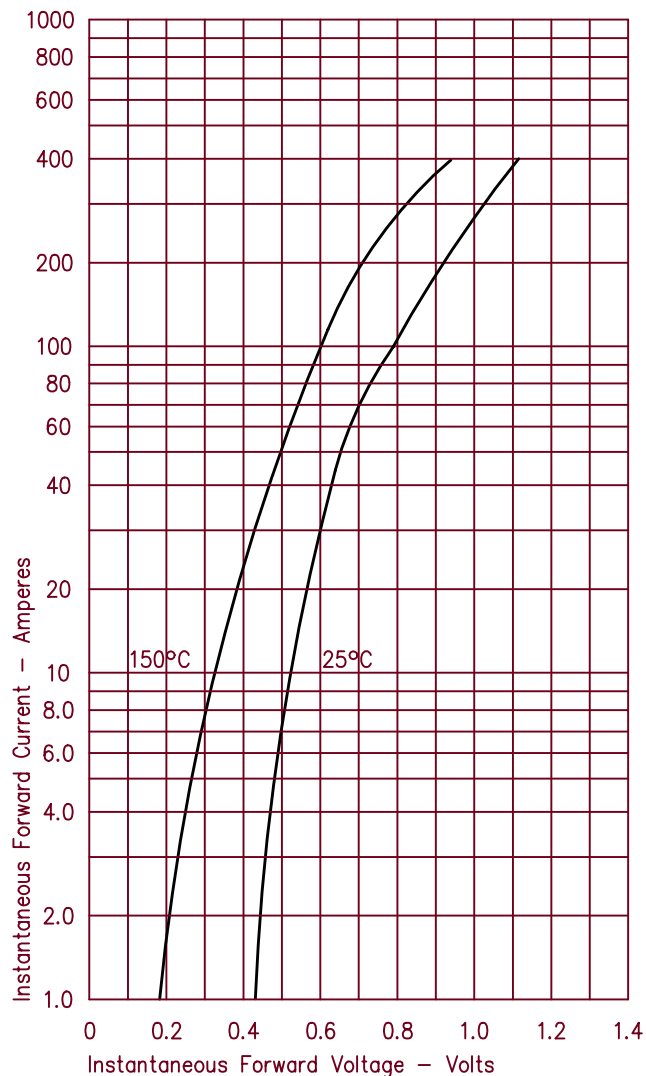


Figure 3
Typical Junction Capacitance — Per Leg

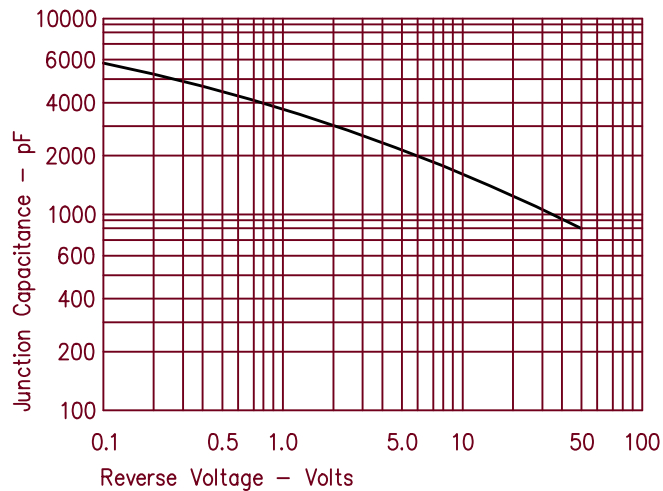


Figure 4
Forward Current Derating — Per Leg

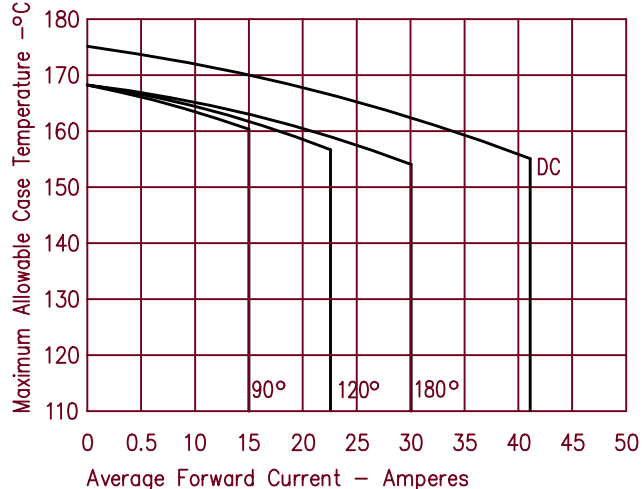


Figure 2
Typical Reverse Characteristics — Per Leg

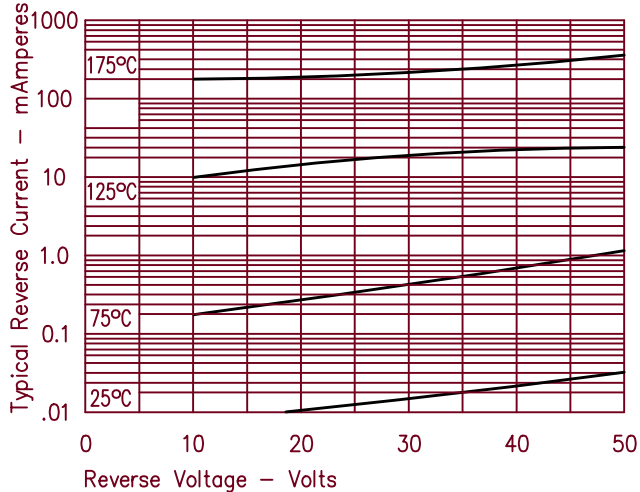


Figure 5
Maximum Forward Power Dissipation — Per Leg

