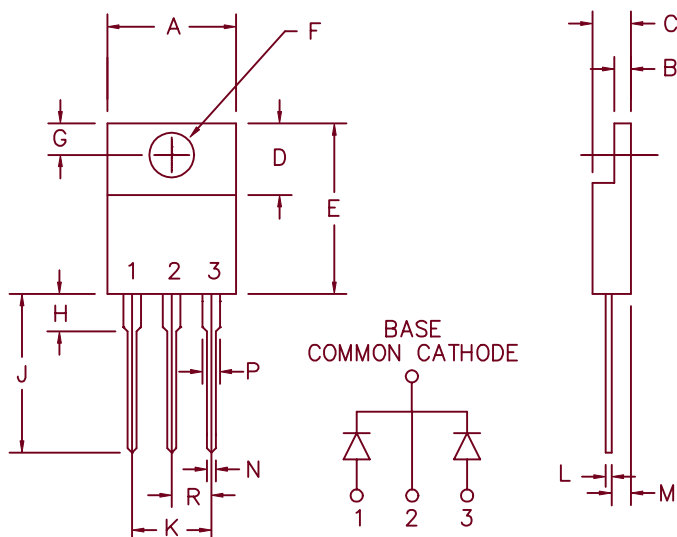


# 10 Amp Schottky Barrier Rectifiers FST10120 — FST10150



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.390	.415	9.91	10.54	
B	.045	.055	1.14	1.40	
C	.180	.190	4.57	4.83	
D	.245	.260	6.22	6.60	
E	.550	.650	13.97	16.51	
F	.139	.161	3.53	4.09	Dia.
G	.100	.135	2.54	3.43	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.022	.357	.559	
M	.080	.115	2.03	2.92	
N	.015	.040	.380	1.02	
P	.045	.070	1.14	1.78	
R	.090	.110	2.29	2.79	

## PLASTIC TO-220AB

### Technical Bulletin

Microsemi Catalog Number	Industrial Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
FST10120		120V	120V
FST10130		130V	130V
FST10150	10CTQ150	150V	150V

- Schottky barrier rectifier
- Guard ring for reverse protection
- Low power loss, high efficiency
- High surge capacity
- $V_{RRM}$  80 to 100 Volts

### Electrical Characteristics

Average Forward Current per pkg.	$I_F(AV)$ 10 Amps	$T_C = 154^\circ C$ , Square wave, $R_{\theta JC} = 1.8^\circ C/W$
Average Forward Current per leg	$I_F(AV)$ 5 Amps	$T_C = 154^\circ C$ , Square wave, $R_{\theta JC} = 3.6^\circ C/W$
Maximum Surge Current per leg	$I_{FSM}$ 200 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max. Peak Forward Voltage per leg	$V_{FM}$ 0.68 Volts	$I_{FM} = 5A, T_J = 125^\circ C^*$
Max. Peak Forward Voltage per leg	$V_{FM}$ 0.82 Volts	$I_{FM} = 5A, T_J = 25^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 500 $\mu A$	$V_{RRM}, T_J = 125^\circ C^*$
Max. Peak Reverse Current per leg	$I_{RM}$ 100 $\mu A$	$V_{RRM}, T_J = 25^\circ C$
Typical Junction Capacitance	$C_J$ 180 pF	$V_R = 5.0V, T_J = 25^\circ C$

\*Pulse test: Pulse width 300  $\mu sec$  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	$R_{\theta JC}$	$3.6^\circ C/W$ Junction to case
Max thermal resistance per pkg.	$R_{\theta JC}$	$1.8^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.5^\circ C/W$ Case to sink
Mounting torque		15 inch pounds maximum (6-32 screw)
Weight		.08 ounces (2.3 grams) typical

# FST10120 — FST10150

Figure 1  
Typical Forward Characteristics — Per Leg

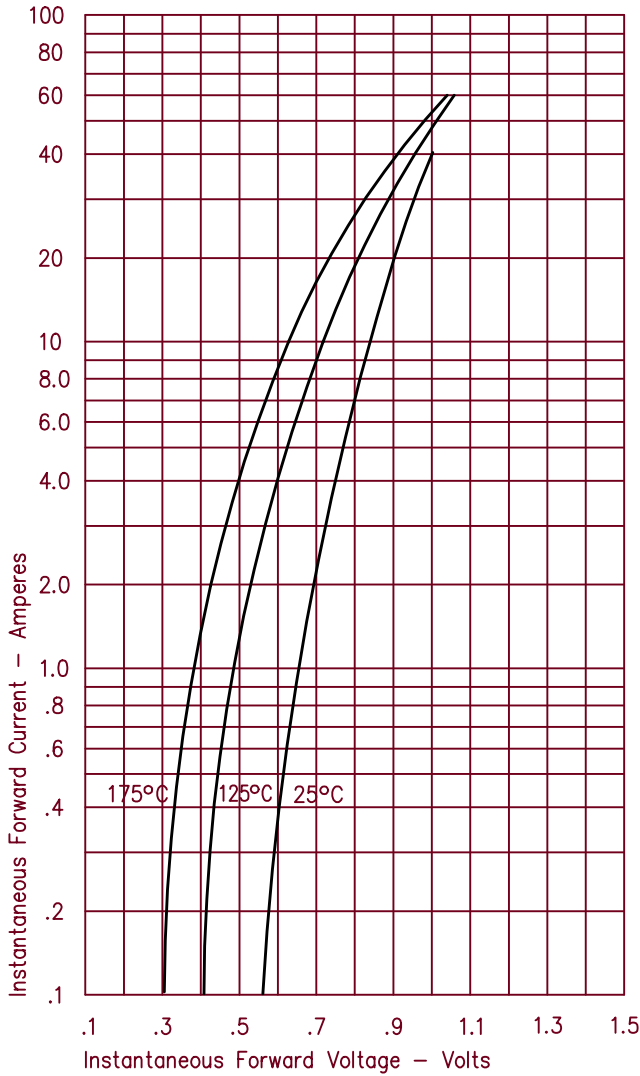


Figure 3  
Typical Junction Capacitance — Per Leg

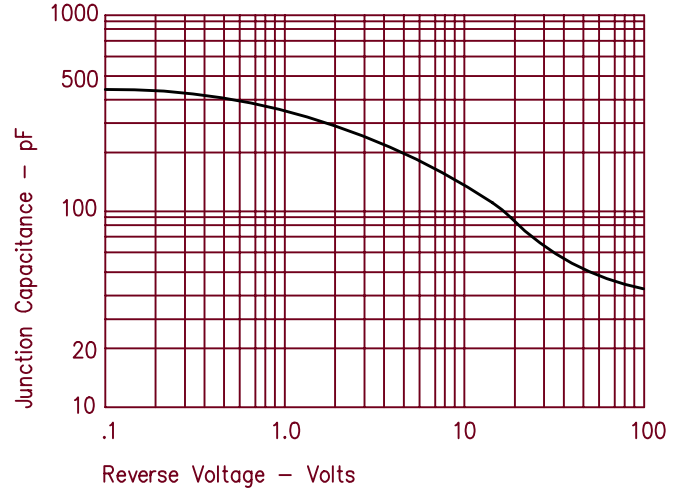


Figure 4  
Forward Current Derating — Per Leg

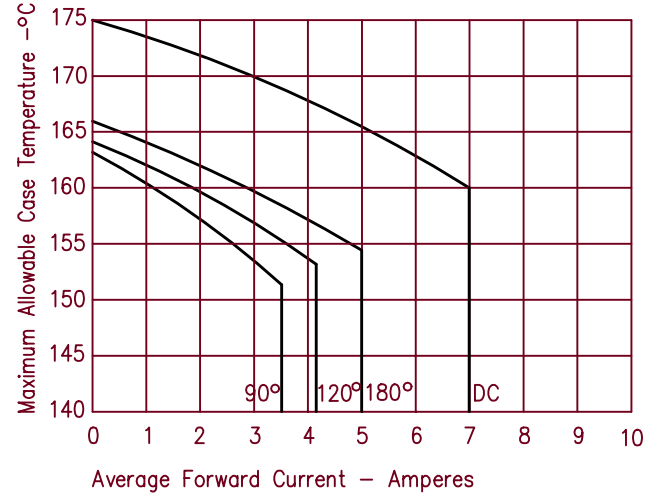


Figure 2  
Typical Reverse Characteristics — Per Leg

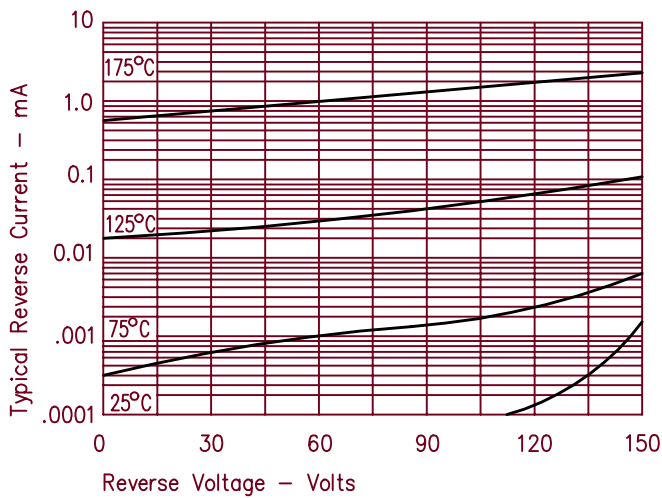
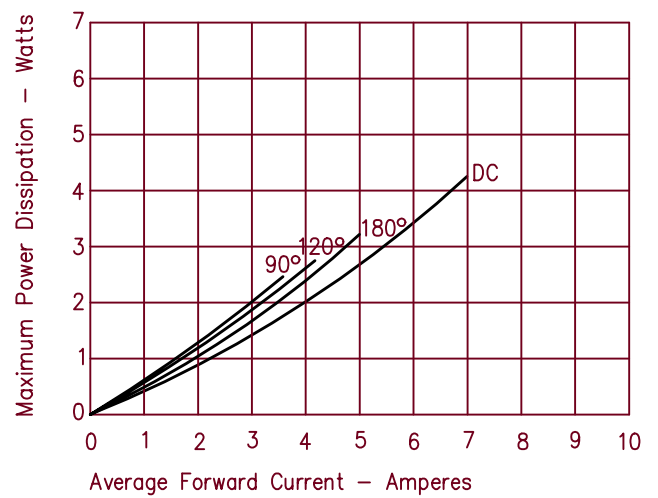


Figure 5  
Maximum Forward Power Dissipation — Per Leg



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