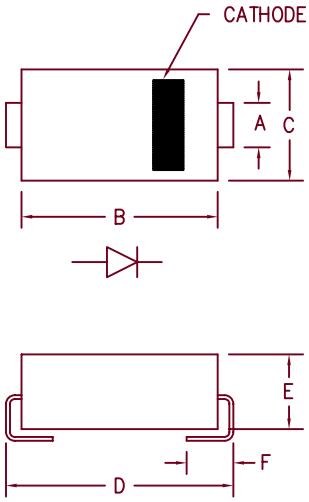
Ultra Fast Recovery Rectifiers

UFS130J – UFS150J



Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	.073	.087	1.85	2.21	
B	.160	.180	4.06	4.57	
C	.130	.155	3.30	3.94	
D	.205	.220	5.21	5.59	
E	.075	.130	1.91	3.30	
F	.030	.060	.760	1.52	

DO–214BA Package

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
UFS130J	ER1G	300V	300V
UFS140J		400V	400V
UFS150J		500V	500V

- Ultra Fast Recovery
- 175°C Junction Temperature
- V_{RRM} 300 to 500 Volts
- 1 Amp Current Rating
- t_{RR} 50nS Max.

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 1.0 Amps	T_L = 143°C, Square wave $R_{\theta JL}$ = 15°C/W
Maximum surge current	I_{FSM} 30 Amps	8.3ms, half sine, T_J = 175°C
Max peak forward voltage	V_{FM} .80 Volts	I_{FM} = 0.1A; T_J = 25°C*
Max peak forward voltage	V_{FM} 1.1 Volts	I_{FM} = 1.0A; T_J = 25°C*
Max reverse recovery time	t_{RR} 50 nS	1/2A, 1A, 1/4A, T_J = 25°C
Max peak reverse current	I_{RM} 10 µA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J 2.5 pF	V_R = 10V, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temperature range	T_{STG}	−55°C to 175°C
Operating junction temp range	T_J	−55°C to 175°C
Maximum thermal resistance	$R_{\theta JL}$	15°C/W Junction to lead
Weight		.0047 ounces (.013 grams) typical

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Figure 1
Typical Forward Characteristics

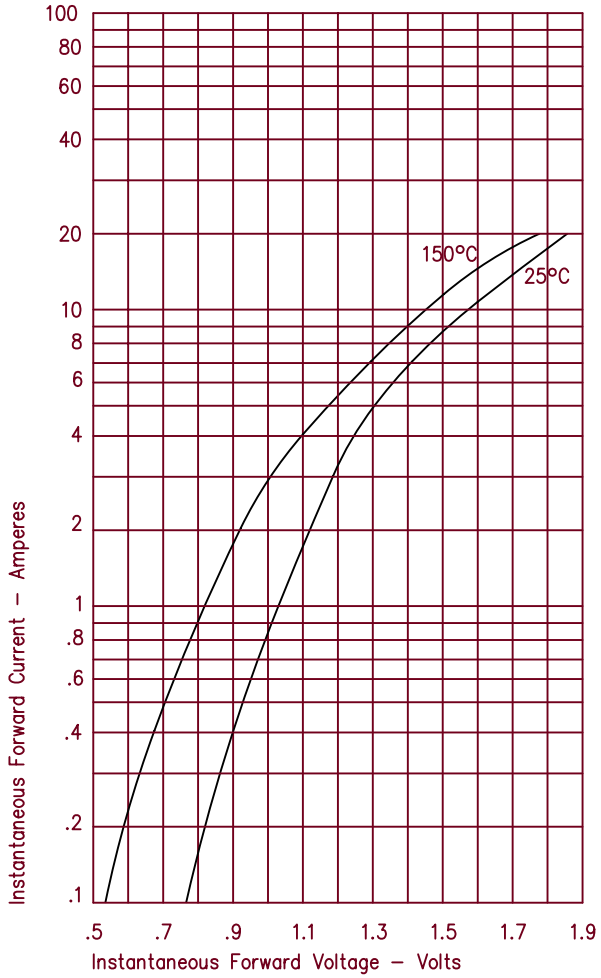

Figure 2
Typical Reverse Characteristics

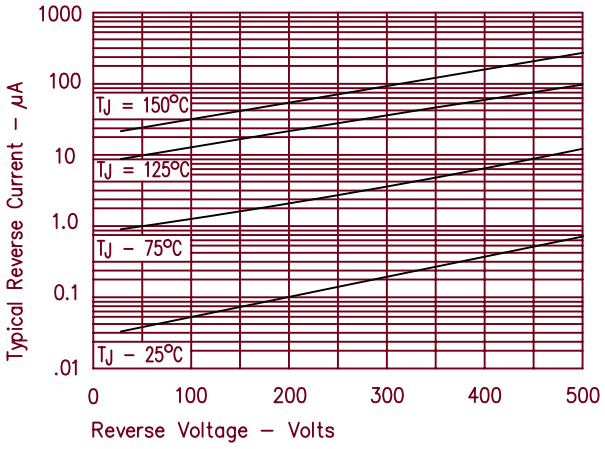

Figure 3
Typical Junction Capacitance