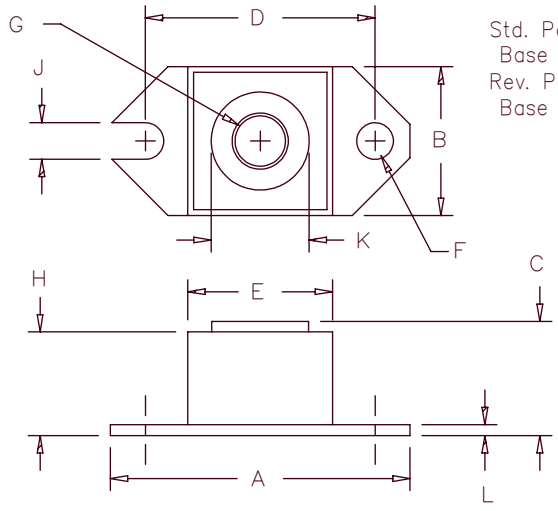
Ultrafast Recovery Modules

HU20130 – HU20150



Std. Polarity
Base is cathode
Rev. Polarity
Base is anode

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	1.52	1.56	38.61	39.62	
B	.725	.775	18.42	19.69	
C	.605	.625	15.37	15.88	
D	1.182	1.192	30.02	30.28	
E	.745	.755	18.92	19.18	Sq.
F	.152	.160	3.86	4.06	Dia.
G		1/4–20 UNC–2B			
H	.525	.580	13.34	14.73	
J	.156	.160	3.96	4.06	
K	.495	.505	12.57	12.83	Dia.
L	.120	.130	3.05	3.30	

Notes:
Baseplate: Nickel plated copper

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
HU20130*	300V	300V
HU20140*	400V	400V
HU20150*	500V	500V

*Add Suffix R for Reverse Polarity

- Ultra Fast Recovery
- 175°C Junction Temperature
- 200 Amp current rating
- ROHS Compliant

Electrical Characteristics

Average forward current	$I_{F(AV)}$ 200 Amps	T_C = 126°C, Square wave, $R_{\theta JC}$ = 0.24°C/W
Maximum surge current	I_{FSM} 2500 Amps	8.3ms, half sine, T_J = 175°C
Max peak forward voltage	V_{FM} 1.25 Volts	I_{FM} = 200A; T_J = 25°C*
Max peak reverse recovery time	t_{rr} 110 nS	I_F = 1A, V_R = 30V di/dt = 25A/μS
Max peak reverse current	I_{RM} 8 mA	V_{RRM}, T_J = 125°C*
Max peak reverse current	I_{RM} 50 uA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J 500 pF	V_R = 10V, T_J = 25°C

*Pulse test: Pulse width 300μsec, 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	$R_{\theta JC}$	0.24°C/W Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	0.12°C/W Case to sink
Terminal Torque		35–40 inch pounds
Mounting Base Torque (outside holes)		20–25 inch pounds
Weight		1.1 ounces (32 grams) typical

HU20130 – HU20150

Figure 1
Typical Forward Characteristics

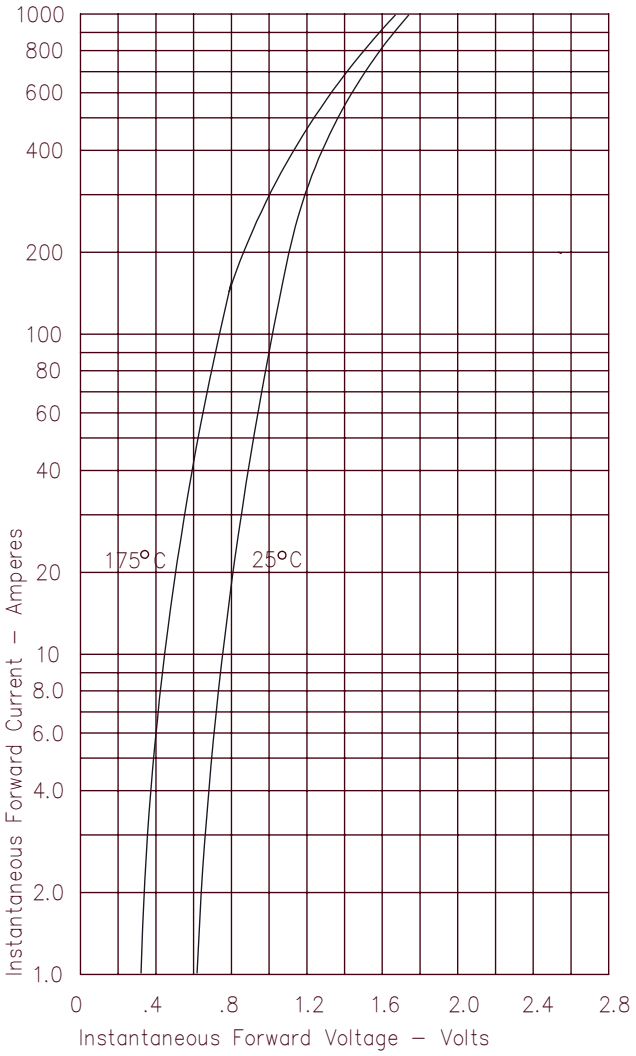


Figure 2
Typical Reverse Characteristics

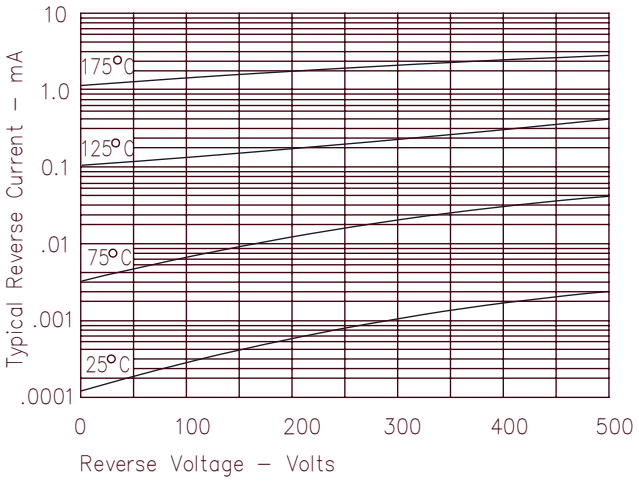


Figure 3
Typical Junction Capacitance

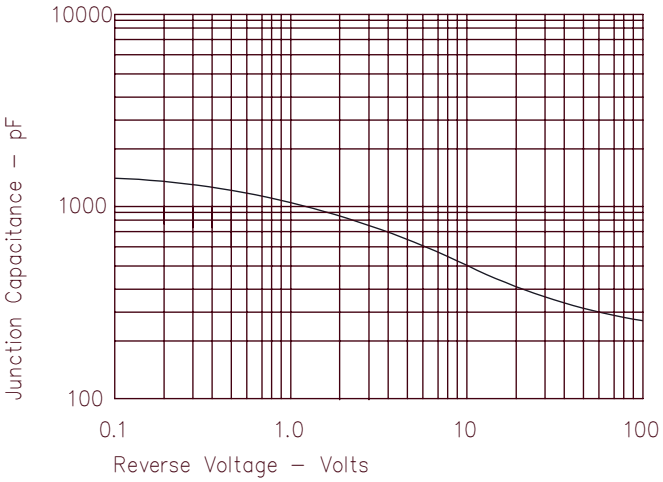


Figure 4
Forward Current Derating

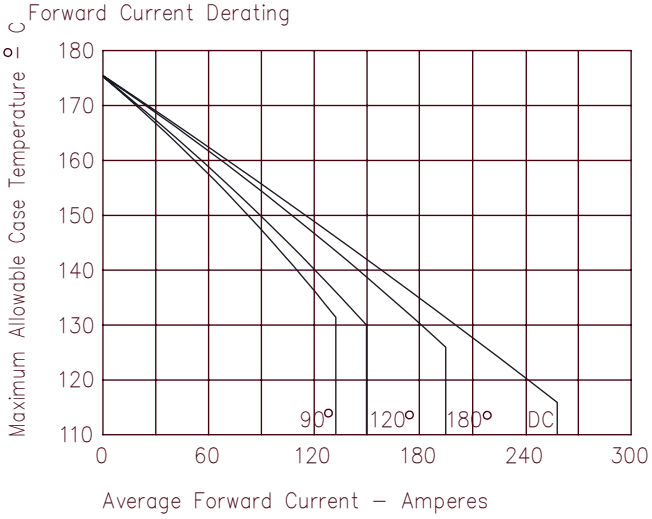


Figure 5
Maximum Forward Power Dissipation

