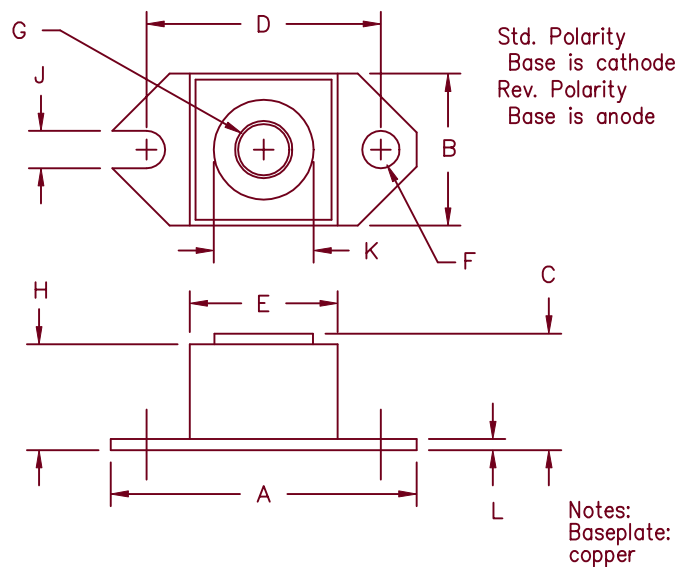


Ultrafast Recovery Modules

HU20010 — HU20020



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.52	1.56	38.86	39.62	
B	.725	.775	18.42	19.69	
C	.605	.625	15.37	15.88	
D	1.177	1.197	29.90	30.41	
E	.745	.755	18.92	19.18	Sq.
F	.152	.162	3.86	4.11	Dia.
G		1/4-20	UNC-2B		
H	.540	.580	13.72	14.73	
J	.152	.162	3.86	4.11	
K	.495	.505	12.57	12.83	Dia.
L	.120	.130	3.05	3.30	

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
HU20010*	100V	100V
HU20015*	150V	150V
HU20020*	200V	200V

*Add Suffix R for Reverse Polarity

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

Electrical Characteristics

Average forward current	$I_F(AV)$ 200 Amps	$T_C = 135^\circ C$, Square wave, $R_{\theta JC} = 0.24^\circ C/W$
Maximum surge current	I_{FSM} 2600 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max peak forward voltage	V_{FM} 0.975 Volts	$I_F = 200A; T_J = 25^\circ C^*$
Max peak reverse recovery time	t_{rr} 100 nS	$I_F = 1A, V_R = 30V$ di/dt = 25A/uS
Max peak reverse current	I_{RM} 8 mA	$V_{RRM}, T_J = 125^\circ C^*$
Max peak reverse current	I_{RM} 50 uA	$V_{RRM}, T_J = 25^\circ C$
Typical junction capacitance	C_J 1400 pF	$V_R = 10V, T_J = 25^\circ C$

*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	$R_{\theta JC}$	$0.24^\circ C/W$ Junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.12^\circ C/W$ 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

HU20010 – HU20020

Figure 1
Typical Forward Characteristics

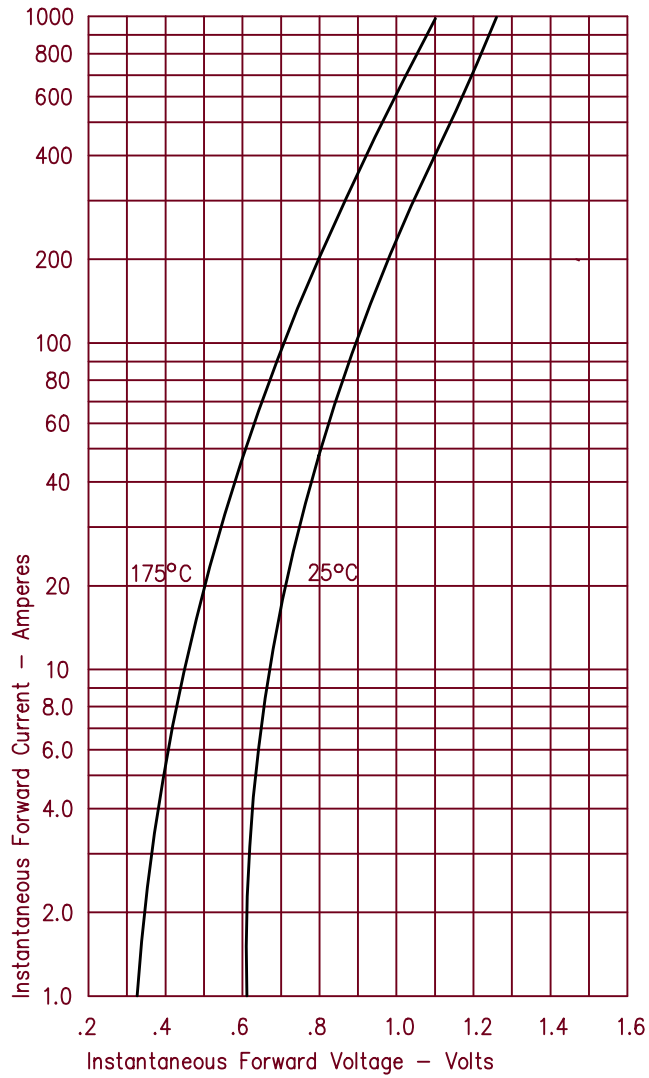


Figure 2
Typical Reverse Characteristics

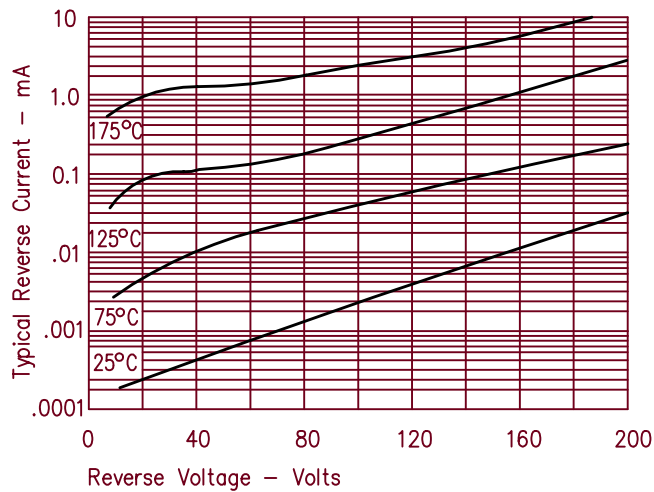


Figure 3
Typical Junction Capacitance

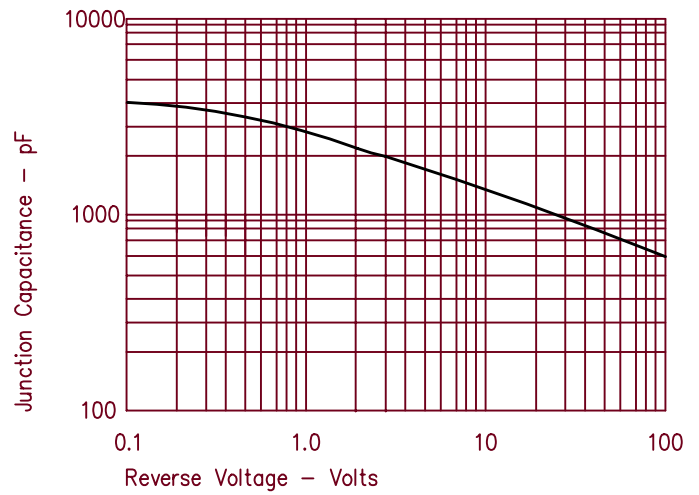


Figure 4
Forward Current Derating

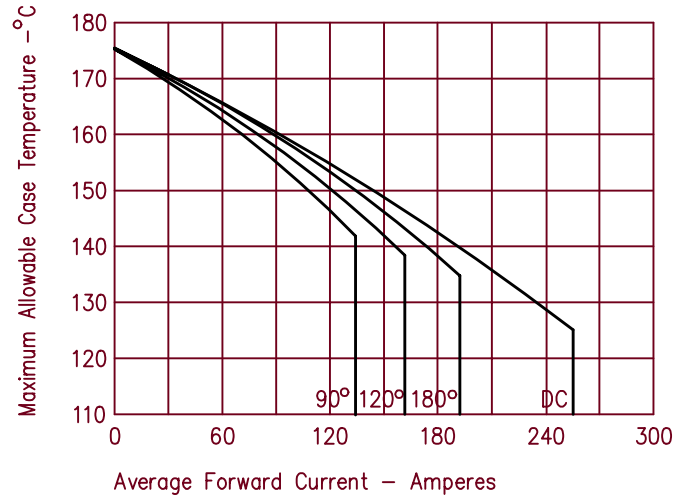


Figure 5
Maximum Forward Power Dissipation

