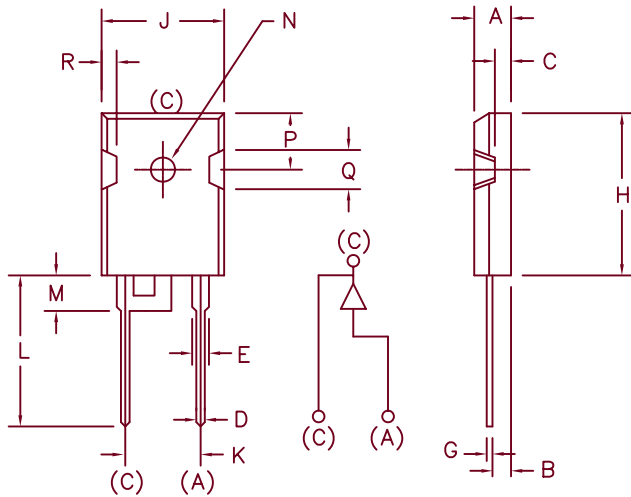


30 Amp Ultrafast Rectifier

UES3005S — UES3015S



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	.185	.209	4.70	5.31	
B	.087	.102	2.21	2.59	
C	.059	.098	1.50	2.49	
D	.040	.055	1.02	1.40	
E	.079	.094	2.01	2.39	
F	---	---	---	---	
G	.016	.031	.410	0.78	
H	.819	.883	20.80	22.4	
J	.627	.650	15.93	16.5	
K	.430	---	10.92	---	
L	.790	.810	20.07	20.6	
M	.157	.180	3.99	4.57	
N	.139	.144	3.53	3.66	Dia.
P	.255	.300	6.48	7.62	
Q	.170	.210	4.32	5.33	
R	.080	.110	2.03	2.79	

Lead frame plating – 85%Sn/15%Pb, 300–800 micro inches
 Leads solder dipped with 63%Sn/37%Pb solder.

Microsemi Catalog Number	Industry Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
UES3005S		50V	50V
UES3010S		100V	100V
UES3015S		150V	150V

- Ultra Fast Recovery
- V_{RRM} 50–150 Volts
- High surge capacity
- 175°C junction temperature
- t_{rr} 35nS maximum

Electrical Characteristics

Average Forward Current	$I_F(AV)$ 30 Amps	$T_C = 127^\circ C$, Square wave
Average Forward Current	$I_F(AV)$ 350 Amps	8.3ms, half sine, $T_J = 175^\circ C$
Max. Peak Forward Voltage	V_{FM} 1.00 Volts	$I_{FM} = 30A$, $T_J = 25^\circ C^*$
Typical peak forward voltage	V_{FM} .90 Volts	$I_{FM} = 30A$, $T_J = 125^\circ C^*$
Typical peak reverse current	I_{RM} 700 μA	V_{RRM} , $T_J = 125^\circ C^*$
Max. peak reverse current	I_{RM} 15 μA	V_{RRM} , $T_J = 25^\circ C$
Typical Junction Capacitance	C_J 210 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	TSTG	-55°C to +175°C
Operating junction temp range	T_J	-55°C to +175°C
Max thermal resistance	$R_{\theta JC}$	1.5°C/W junction to case
Mounting torque		8–10 inch pounds (#6 screw)
Weight		.22 ounces (6.2 grams) typical

UES3005S — UES3015S

Figure 1
Typical Forward Characteristics

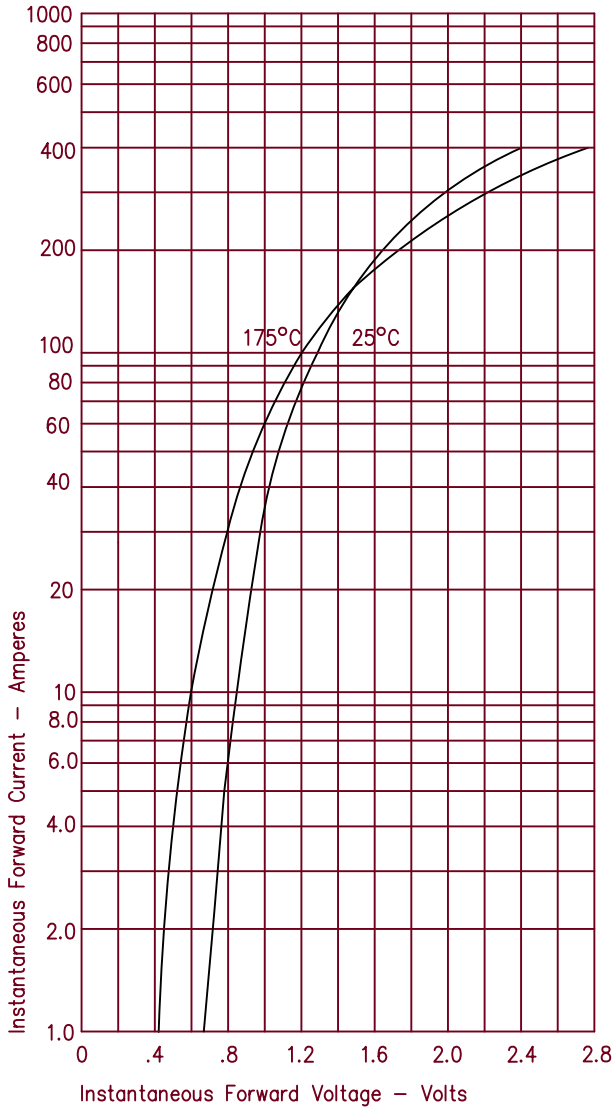


Figure 2
Typical Reverse Characteristics

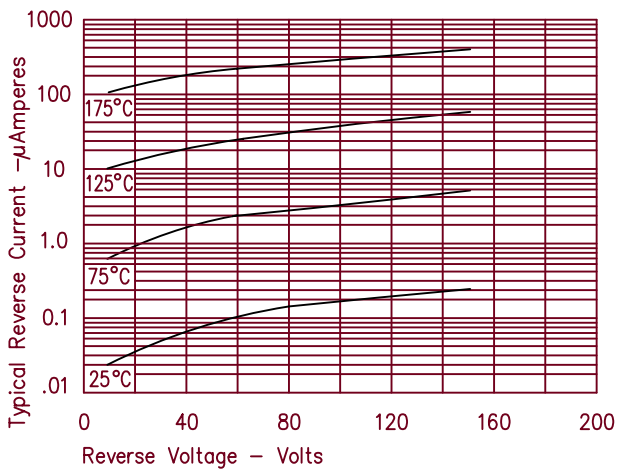


Figure 3
Typical Junction Capacitance

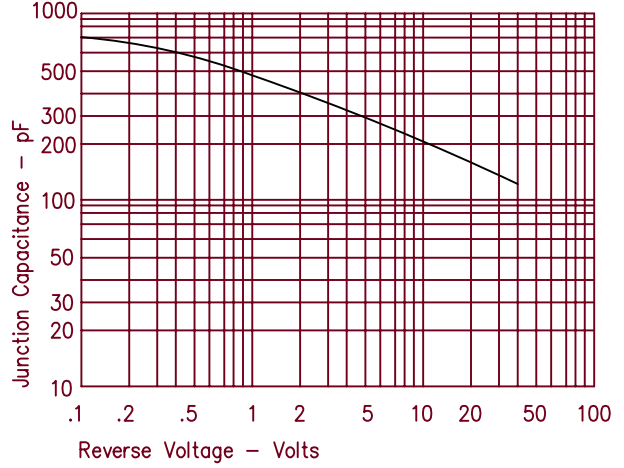


Figure 4
Forward Current Derating

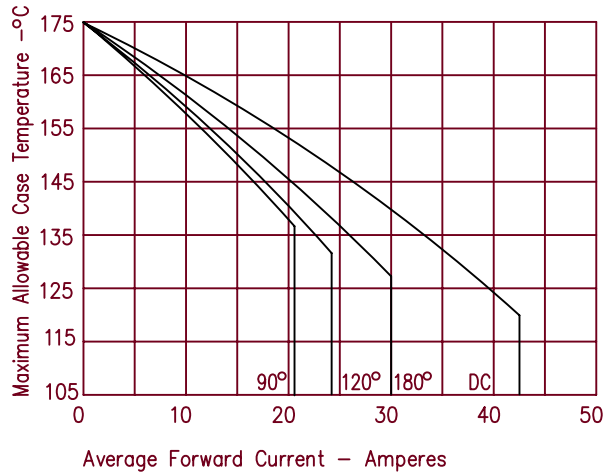


Figure 5
Maximum Forward Power Dissipation

