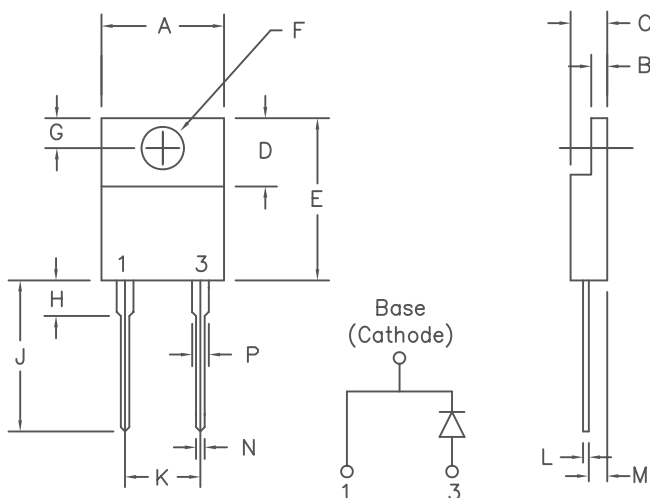


16 Amp Ultra Fast Rectifiers UES1501 — UES1504



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	.155	3.53	3.94	Dia.
G	.100	.120	2.54	3.05	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.025	0.35	0.63	
M	.080	.115	2.03	2.92	
N	.028	.038	0.71	0.96	
P	.045	.055	1.14	1.40	

Similar to TO-220AC

Microsemi Catalog Number	Industry Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
UES1501		50V	50V
UES1502		100V	100V
UES1503		150V	150V
UES1504		200V	200V

- Ultra Fast Recovery Rectifier
- 150°C Junction Temperature
- V_{RRM} 50 TO 200 Volts
- t_{RR} 35 nsec maximum

Electrical Characteristics

Average forward current	$I_F(AV)$ 15 Amps	$T_C = 123^\circ C$
Maximum surge current	I_{FSM} 250 Amps	8.3ms, half sine, $T_J = 150^\circ C$
Max peak forward voltage	V_{FM} 1.0 Volts	$I_{FM} = 16A: T_J = 25^\circ C^*$
Typical peak forward voltage	V_{FM} 0.72 Volts	$I_{FM} = 16A: T_J = 150^\circ C^*$
Max peak reverse current	I_{RM} 10 μA	$V_{RRM}, T_J = 25^\circ C$
Typical peak reverse current	I_{RM} 100 μA	$V_{RRM}, T_J = 150^\circ C^*$
Max recovery time	t_{RR} 35 ns	1/2A, 1A, 1/4A
Typical junction capacitance	C_J 70pF	$V_R = 10V, T_J = 25^\circ C$

*Pulse test: Pulse width 300 μ 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 $150^\circ C$
Max thermal resistance	$R_{\theta JC}$	$2.0^\circ C/W$ Junction to Case
Mounting torque		8-12 inch pounds (6-32 screw)
Weight		0.08 ounces (2.3 grams) typical



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05-31-07 Rev. 2

UES1501 — UES1504

Figure 1
Typical Forward Characteristics

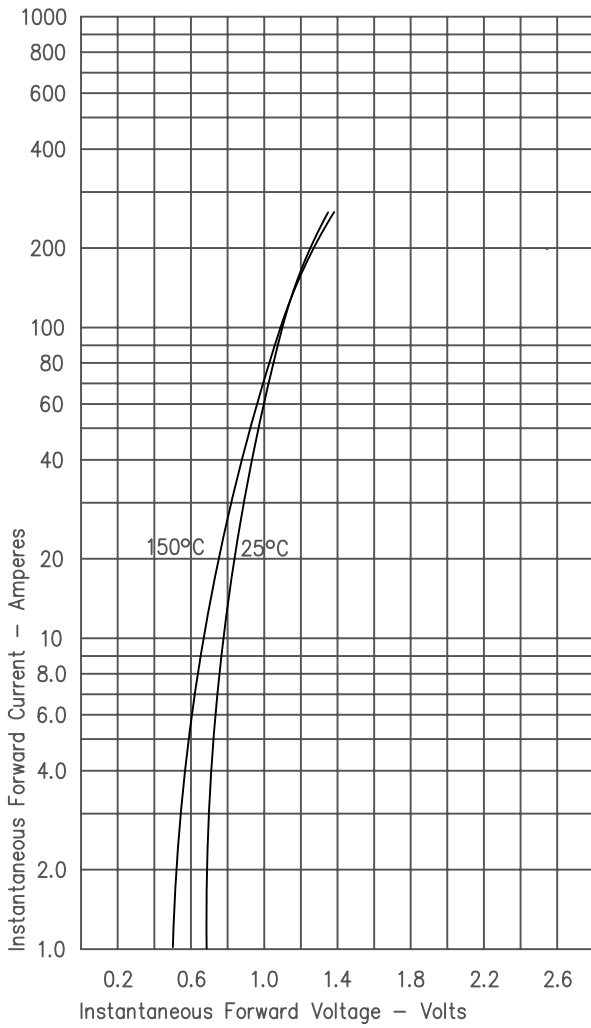


Figure 3
Typical Junction Capacitance

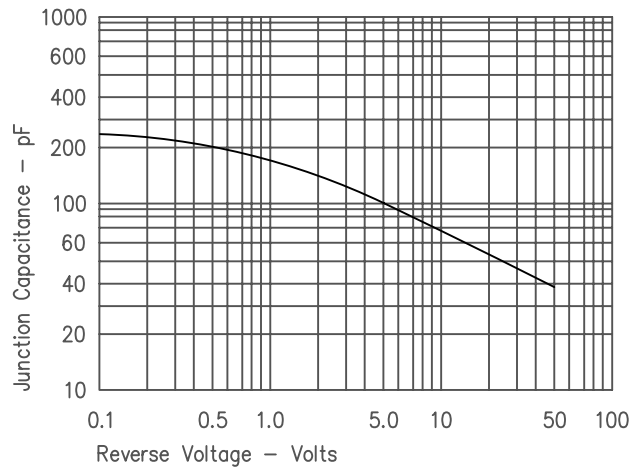


Figure 4
Forward Current Derating

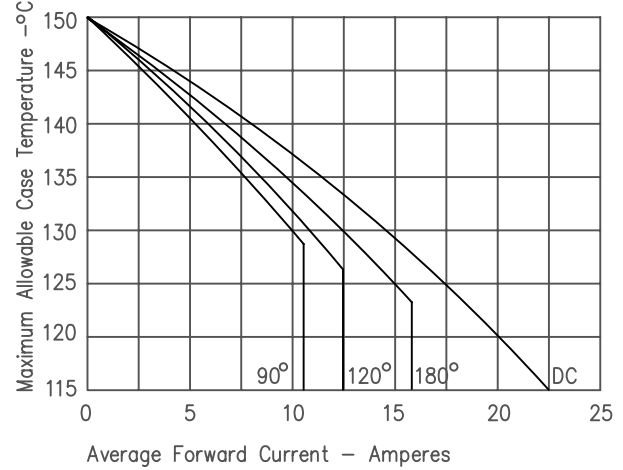


Figure 2
Typical Reverse Characteristics

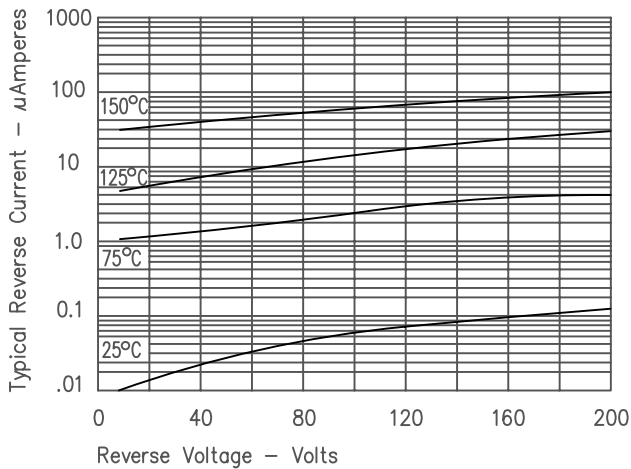


Figure 5
Maximum Forward Power Dissipation

