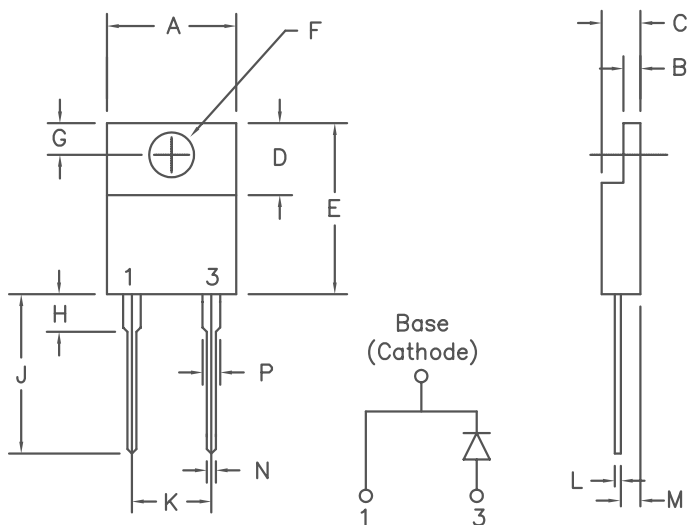


# 8 Amp Ultra Fast Rectifiers UES1401 — UES1404



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
UES1401		50V	50V
UES1402		100V	100V
UES1403		150V	150V
UES1404		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	$I_F(AV)$ 8 Amps	$T_C = 132^\circ C$
Maximum surge current	$I_{FSM}$ 100 Amps	8.3ms, half sine, $T_J = 150^\circ C$
Max peak forward voltage	$V_{FM}$ 1.0 Volts	$I_{FM} = 8A; T_J = 25^\circ C^*$
Typical peak forward voltage	$V_{FM}$ 0.75 Volts	$I_{FM} = 8A; T_J = 150^\circ C^*$
Max peak reverse current	$I_{RM}$ 10 $\mu A$	$V_{RRM}, T_J = 25^\circ C$
Typical peak reverse current	$I_{RM}$ 125 $\mu A$	$V_{RRM}, T_J = 150^\circ C$
Max recovery time	$t_{RR}$ 35 ns	1/2A, 1A, 1/4A
Typical junction capacitance	$C_J$ 56pF	$V_R = 10V, T_J = 25^\circ C$

\*Pulse test: Pulse width 300  $\mu$ 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	$R_{\theta JC}$	2.4°C/W junction to case
Mounting torque		8-12 inch pounds (6-32 screw)
Weight		0.08 ounces (2.3 grams) typical

# UES1401 — UES1404

Figure 1  
Typical Forward Characteristics

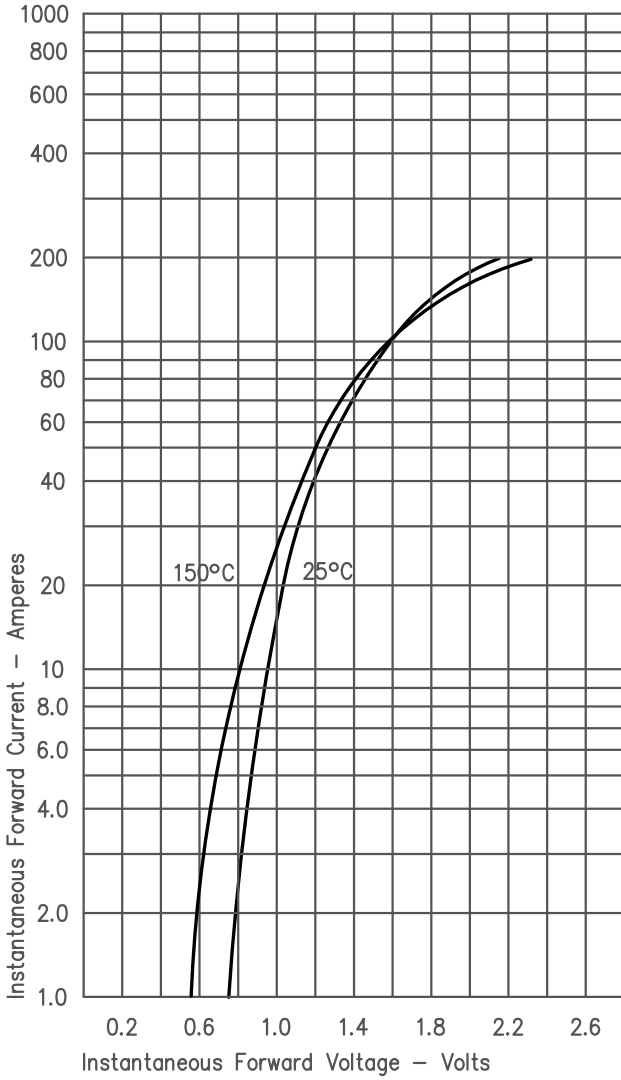


Figure 3  
Typical Junction Capacitance

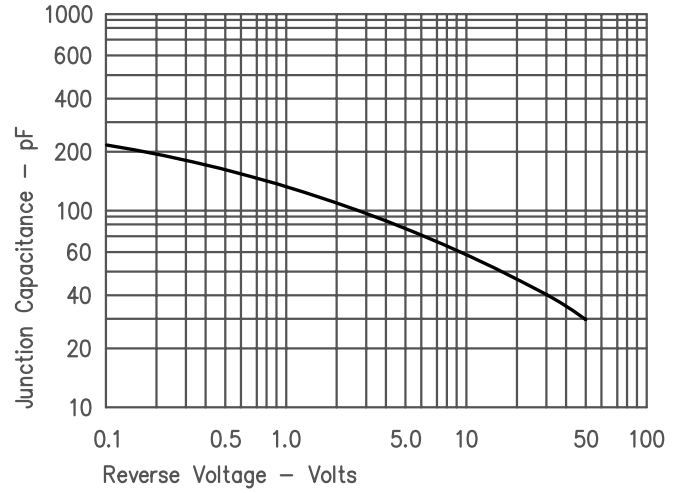


Figure 4  
Forward Current Derating

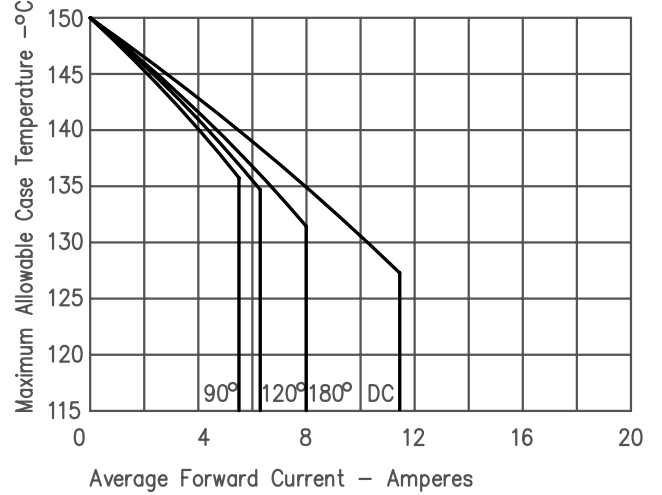


Figure 2  
Typical Reverse Characteristics

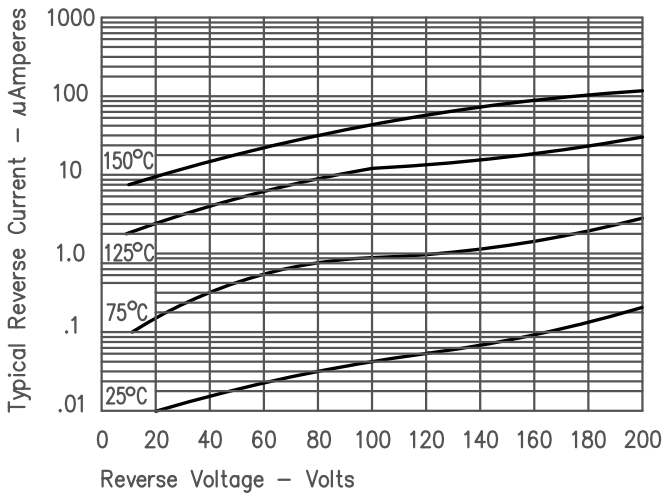


Figure 5  
Maximum Forward Power Dissipation

