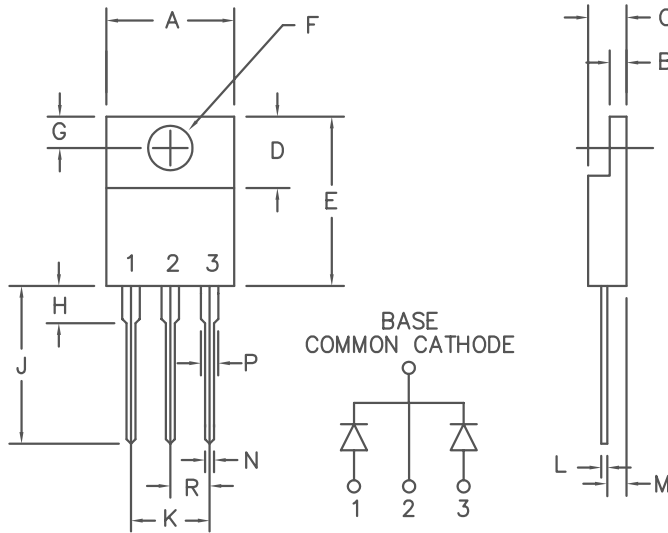


16 Amp Ultra Fast Rectifiers UES2401 — UES2404



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	.161	3.53	4.09	Dia.
G	.100	.135	2.54	3.43	
H	---	.250	---	6.35	
J	.500	.580	12.70	14.73	
K	.190	.210	4.83	5.33	
L	.014	.022	.357	.559	
M	.080	.115	2.03	2.92	
N	.015	.040	.380	1.02	
P	.045	.070	1.14	1.78	
R	.090	.110	2.29	2.79	

PLASTIC TO-220AB

Microsemi Catalog Number	Industry Part Number	Repetitive Peak Reverse Voltage	Transient Peak Reverse Voltage
UES2401		50V	50V
UES2402		100V	100V
UES2403		150V	150V
UES2404		200V	200V

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

Electrical Characteristics

Average forward current per leg	$I_{F(AV)}$ 8 Amps	$T_C = 135^\circ C$
Average forward current per package	$I_{F(AV)}$ 16 Amps	$T_C = 135^\circ C$
Maximum surge current per leg	I_{FSM} 100 Amps	8.3ms, half sine, $T_J = 150^\circ C$
Max peak forward voltage per leg	V_{FM} 0.95 Volts	$I_{FM} = 8A; T_J = 25^\circ C^*$
Typical peak forward voltage per leg	V_{FM} 0.70 Volts	$I_{FM} = 8A; T_J = 150^\circ C^*$
Max peak reverse current per leg	I_{RM} 10 μA	$V_{RRM}, T_J = 25^\circ C$
Typical peak reverse current per leg	I_{RM} 100 μA	$V_{RRM}, T_J = 150^\circ C^*$
Max reverse recovery time	t_{RR} 35 ns	1/2A, 1A, 1/4A
Typical junction capacitance per leg	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 per leg	$R_{\theta JC}$	2.4°C/W Junction to Case
Max thermal resistance per package	$R_{\theta JC}$	1.2°C/W Junction to Case
Mounting torque		8–12 inch pounds (6–32 screw)
Weight		0.08 ounces (2.3 grams) typical

UES2401 — UES2404

Figure 1
Typical Forward Characteristics — Per Leg

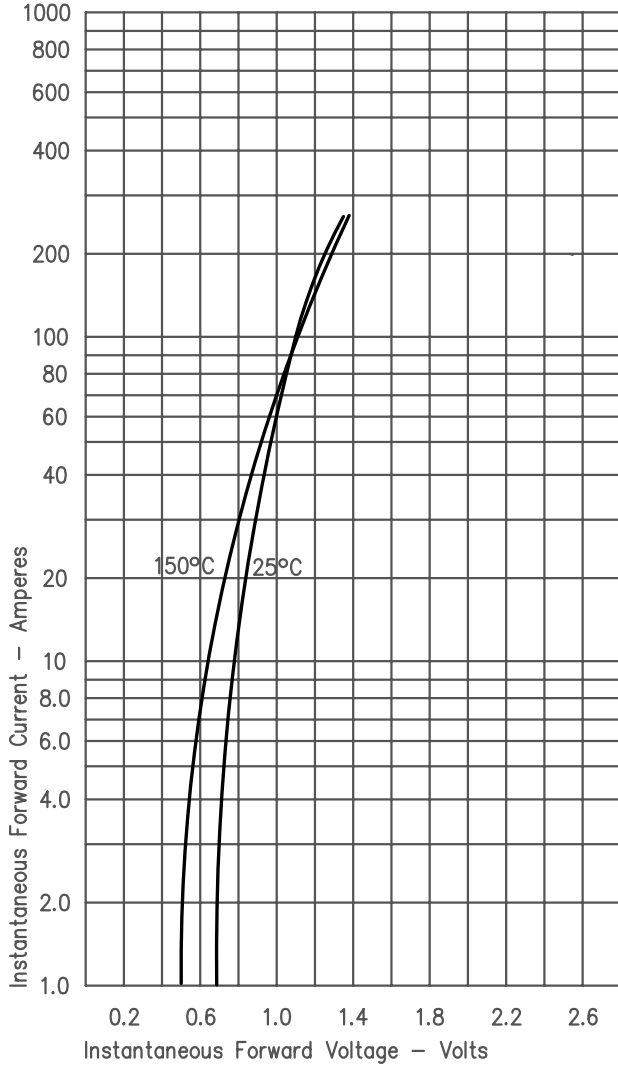


Figure 3
Typical Junction Capacitance — Per Leg

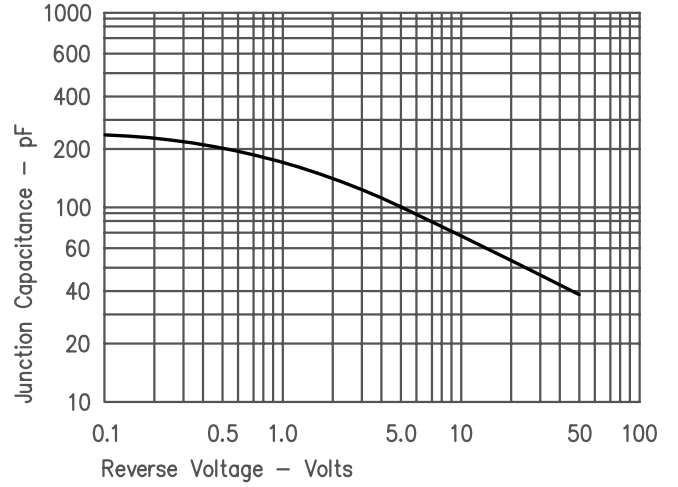


Figure 4
Forward Current Derating — Per Leg

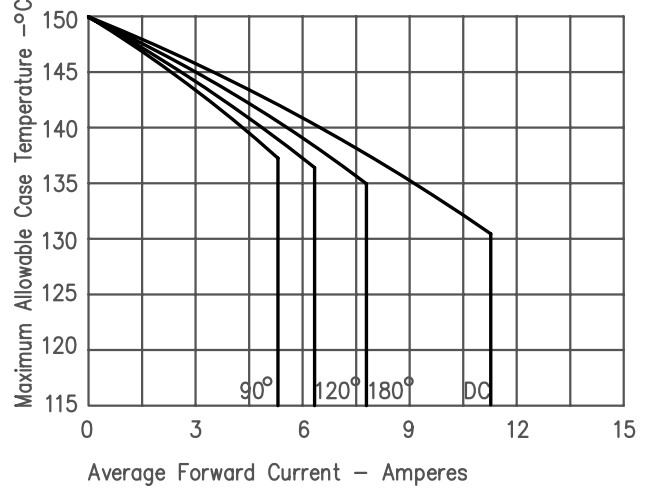


Figure 2
Typical Reverse Characteristics — Per Leg

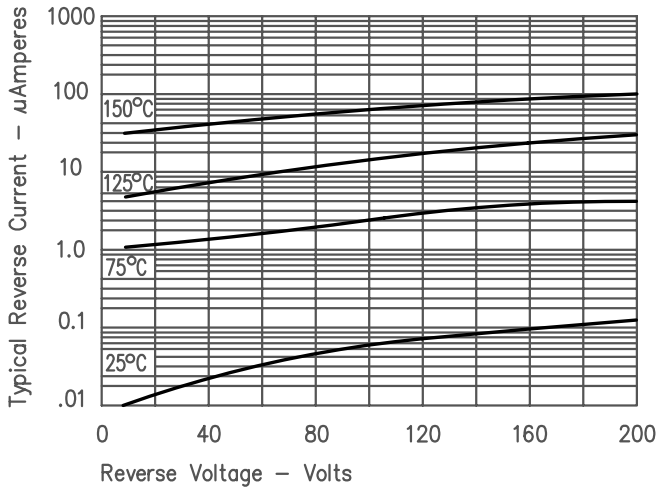


Figure 5
Maximum Forward Power Dissipation — Per Leg

