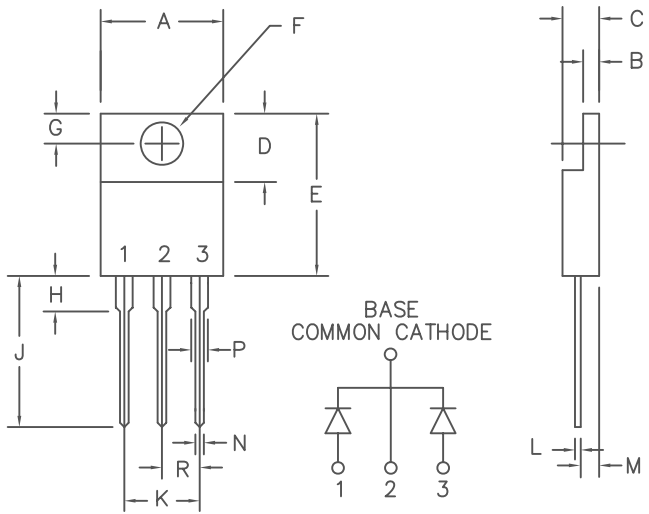


16 Amp Ultra Fast Rectifiers

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 |

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05-31-07 Rev. 2

UES2401 — UES2404

Figure 1
Typical Forward Characteristics — Per Leg

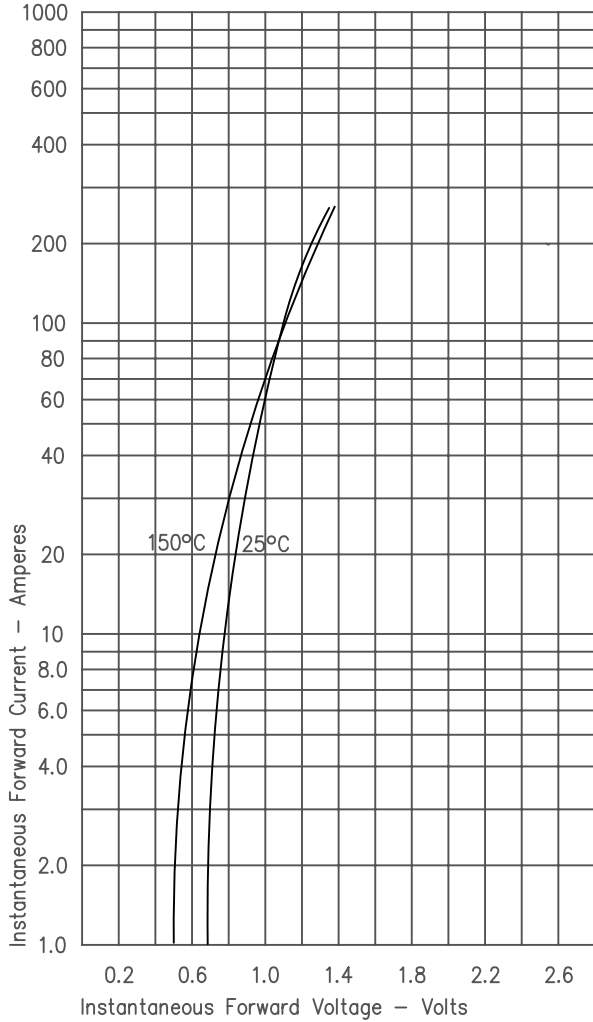


Figure 3
Typical Junction Capacitance — Per Leg

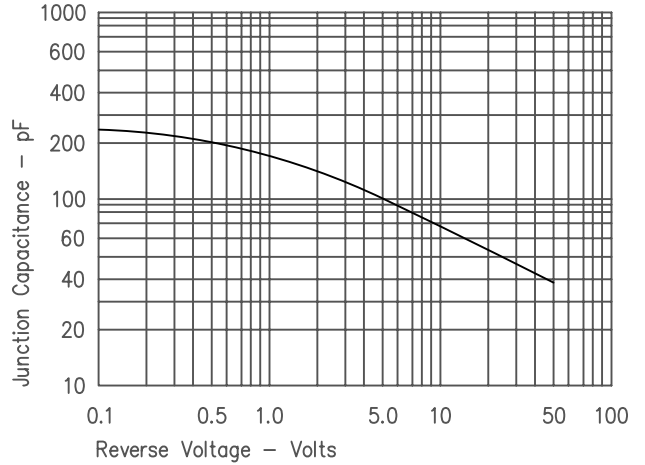


Figure 4
Forward Current Derating — Per Leg

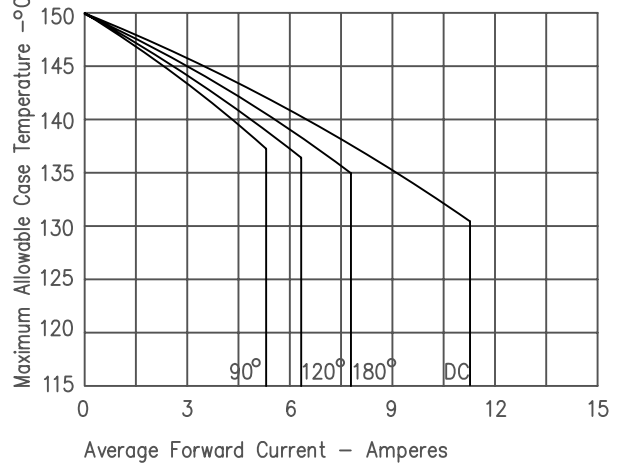


Figure 2
Typical Reverse Characteristics — Per Leg

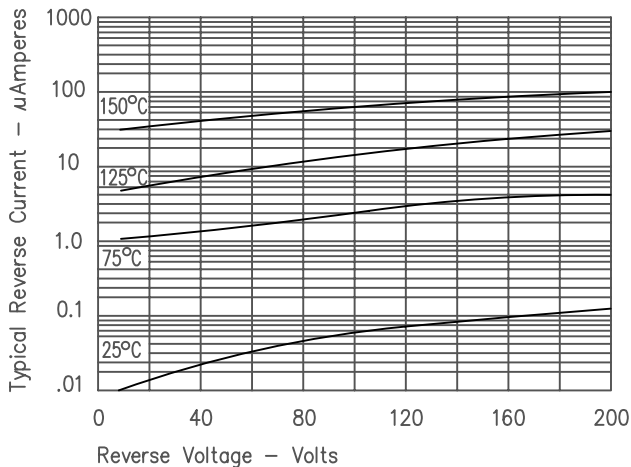


Figure 5
Maximum Forward Power Dissipation — Per Leg

