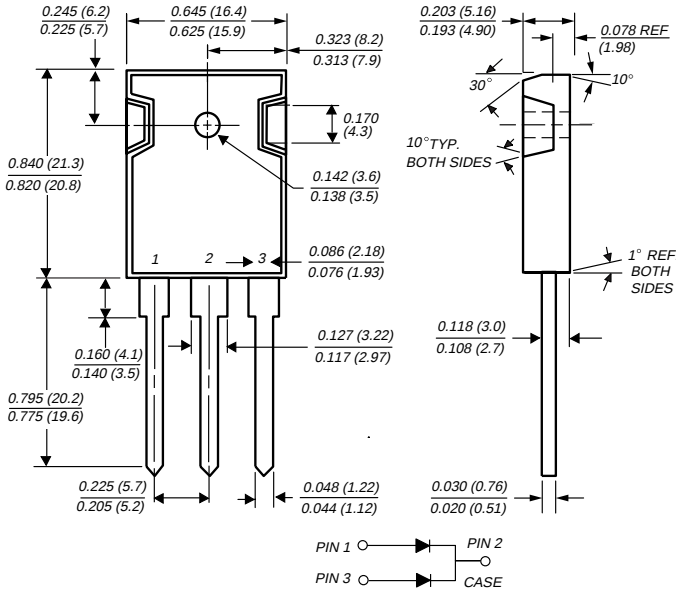


TO-247AD (TO-3P)



Dimensions in inches and (millimeters)

Dual Ultrafast Plastic Rectifier

Reverse Voltage 50 to 600 V

Forward Current 30 A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center-tap
- Glass passivated chip junctions
- Superfast recovery times for high efficiency
- Low forward voltage, high current high current capability
- Low thermal resistance, low power loss
- High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds

Mechanical Data

Case: JEDEC TO-247AD molded plastic body over passivated chips

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in. - lbs. max.

Weight: 0.22 ounce, 6.3 grams

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	FEP 30AP	FEP 30BP	FEP 30CP	FEP 30DP	FEP 30FP	FEP 30GP	FEP 30HP	FEP 30JP	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current at $T_C=100^\circ\text{C}$	$I_{F(AV)}$	30								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_C=100^\circ\text{C}$	I_{FSM}	300								A
Typical thermal resistance (NOTE 1)	$R_{\theta JC}$	1.0								°C/W
Operating storage and temperature range	T_J, T_{STG}	-55 to +150								°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	FEP 30AP	FEP 30BP	FEP 30CP	FEP 30DP	FEP 30FP	FEP 30GP	FEP 30HP	FEP 30JP	Units
Maximum instantaneous forward voltage per leg at 15.0A	V _F	0.95				1.3		1.5		V
Maximum DC reverse current per leg at rated DC blocking voltage T _C =25°C T _C =100°C	I _R	10 500								μA
Maximum reverse recovery time per leg at I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	35				50				ns
Typical junction capacitance per leg at 4.0V, 1MHz	C _J	175						145		pF

NOTES:

(1) Thermal resistance from junction to case per leg mounted on heatsink

FEP30AP thru FEP30JP

Ratings & Characteristic Curves

FIG. 1 - FORWARD CURRENT DERATING CURVE

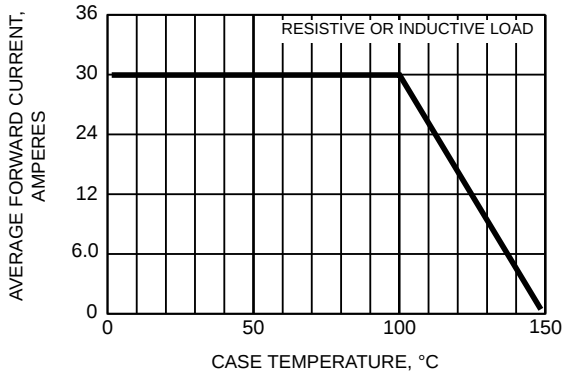


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

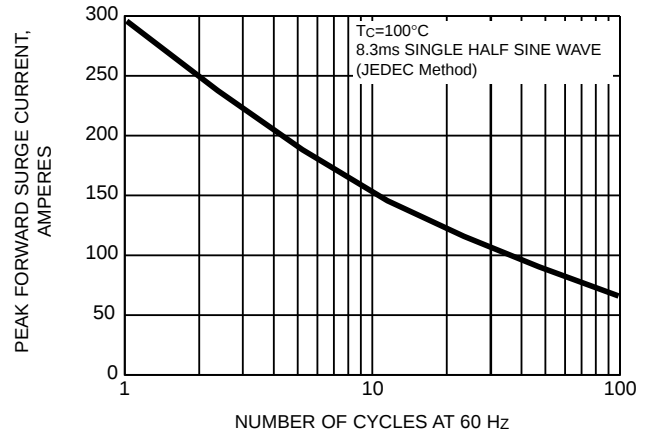


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

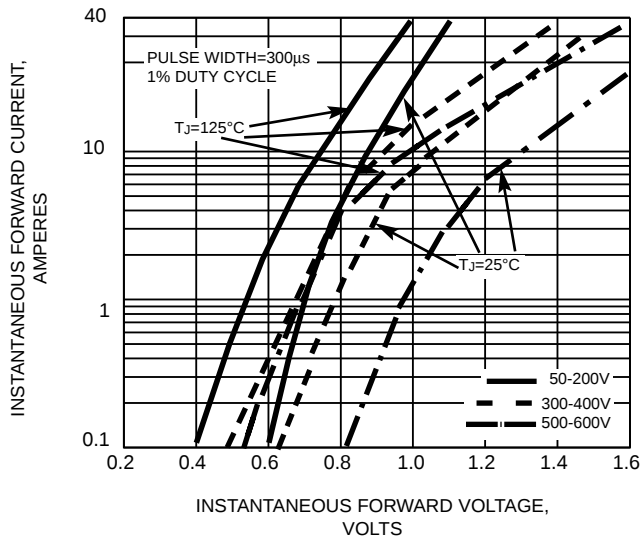


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

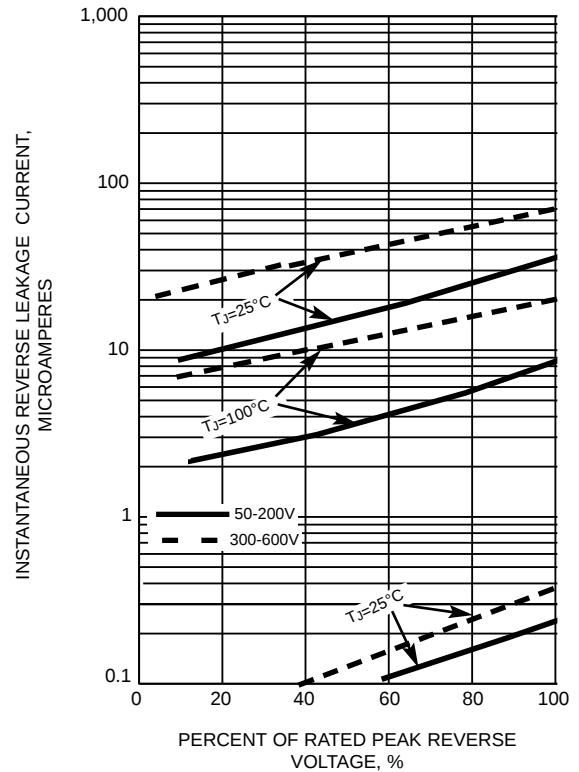


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

