

FEP30AP THRU FEP30JP

FAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 600 Volts

Forward Current - 30.0 Amperes

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 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

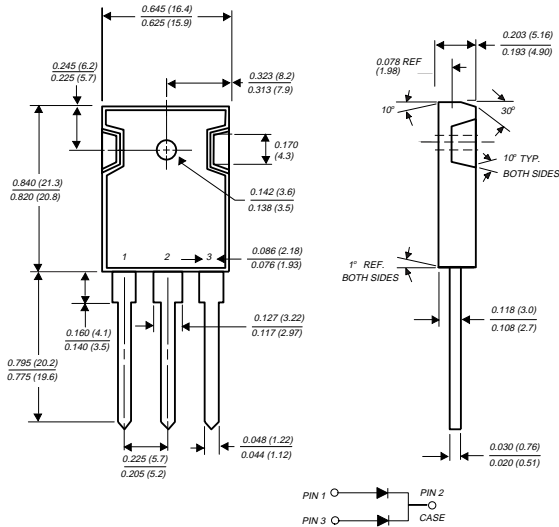
Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in. - lbs. max.

Weight: 0.22 ounce, 6.3 grams

TO-247AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND 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 repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	Volts
Maximum average forward rectified current at $T_C=100^\circ\text{C}$	$I_{(AV)}$	30.0								Amps
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}	300.0								Amps
Maximum instantaneous forward voltage per leg at 15.0A	V_F	0.95			1.3		1.5			Volts
Maximum DC reverse current at rated DC blocking voltage $T_C=25^\circ\text{C}$ $T_C=100^\circ\text{C}$	I_R	10.0				500.0				μA
Maximum reverse recovery time (NOTE 1) per leg	t_{rr}	35.0			50.0					ns
Typical junction capacitance per leg (NOTE 2)	C_J	175.0						145.0		pF
Typical thermal resistance (NOTE 3)	$R_{\theta JC}$	1.0								$^\circ\text{C}/\text{W}$
Operating storage and temperature range	T_J, T_{STG}	-55 to +150								$^\circ\text{C}$

NOTES:

- Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- Thermal resistance from junction to case per leg mounted on heatsink

RATINGS AND CHARACTERISTIC CURVES FEP30AP THRU FEP30JP

FIG. 1 - FORWARD CURRENT DERATING CURVE

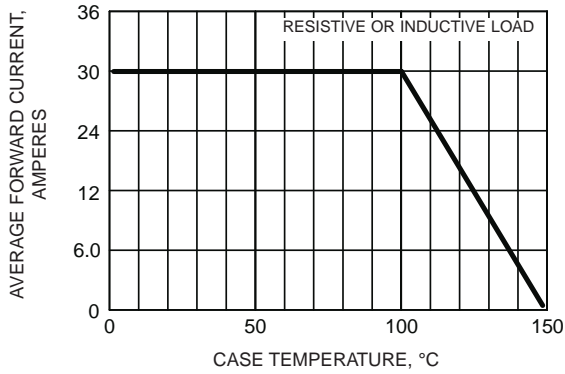


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

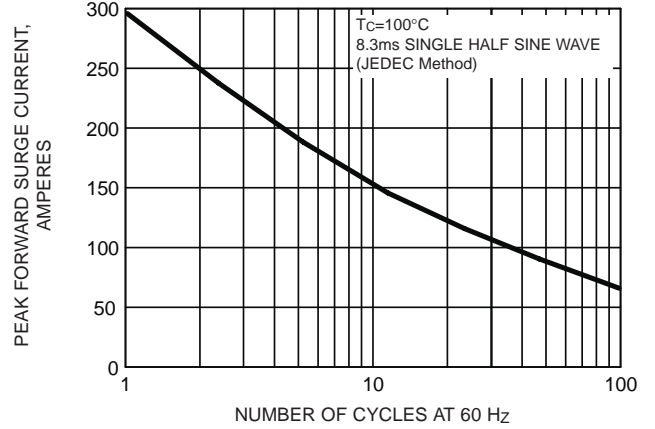


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

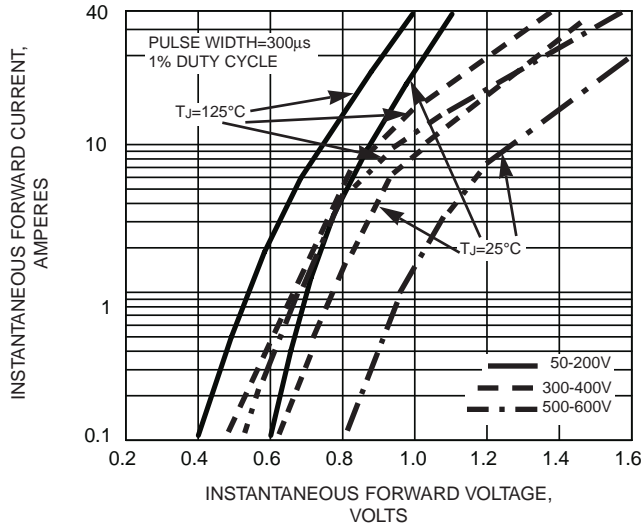


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

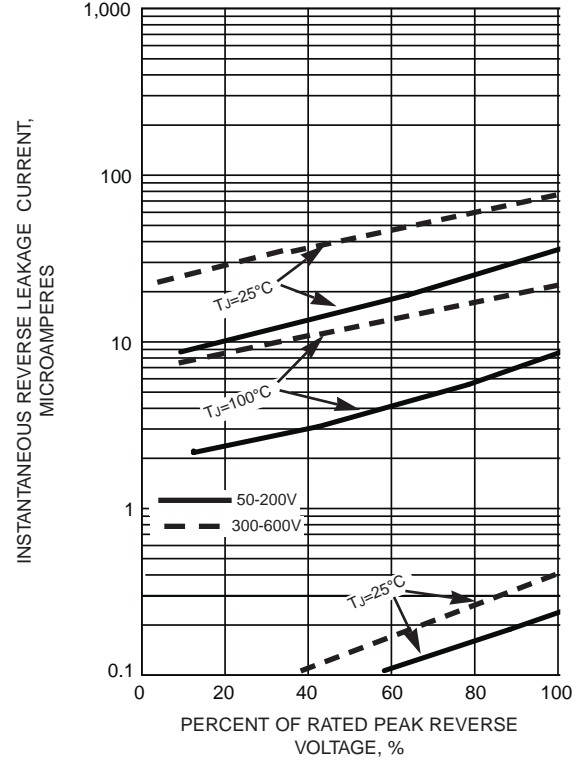


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

