

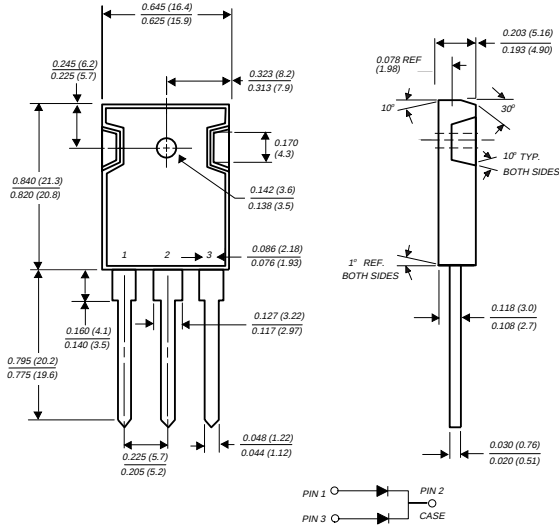
FEP30AP THRU FEP30JP

FAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 600 Volts

Forward Current - 30.0 Amperes

TO-247AD



Dimensions in inches and (millimeters)

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

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°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°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°C T _C =100°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 _{θJC}	1.0								°C/W
Operating storage and temperature range	T _J , T _{STG}	-55 to +150								°C

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

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

RATINGS AND CHARACTERISTIC CURVES FEP30AP THRU FEP30JP

FIG. 1 - FORWARD CURRENT DERATING CURVE

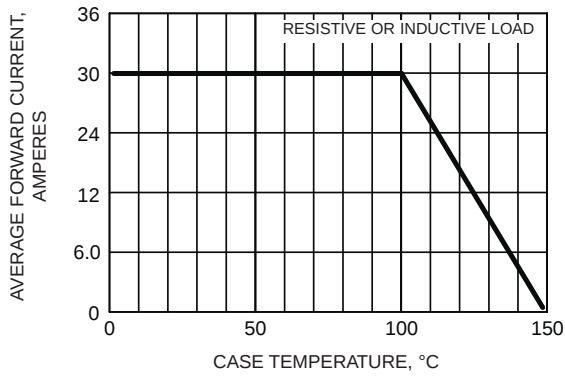


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

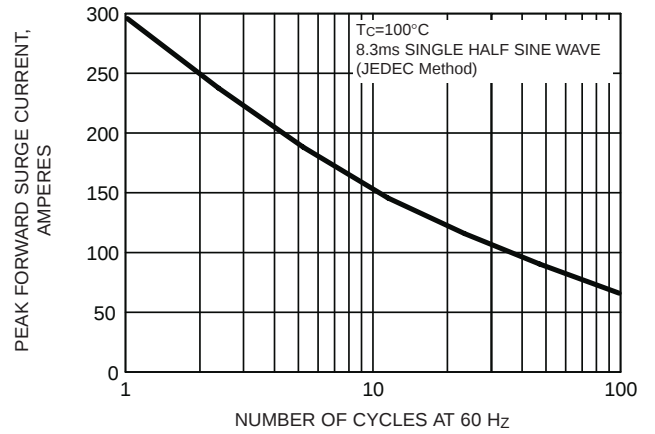


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

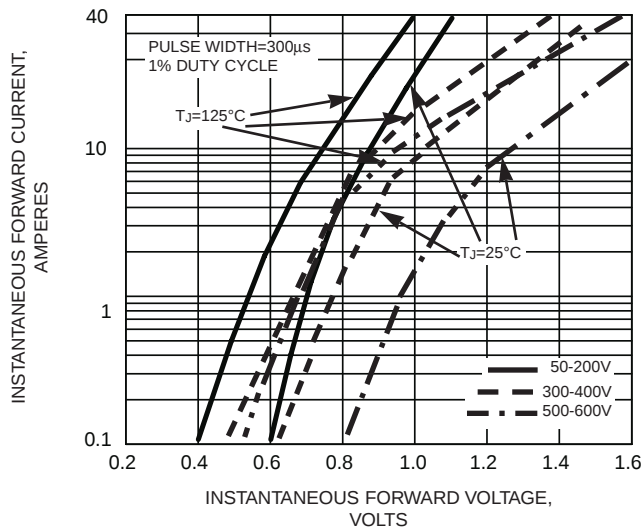


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

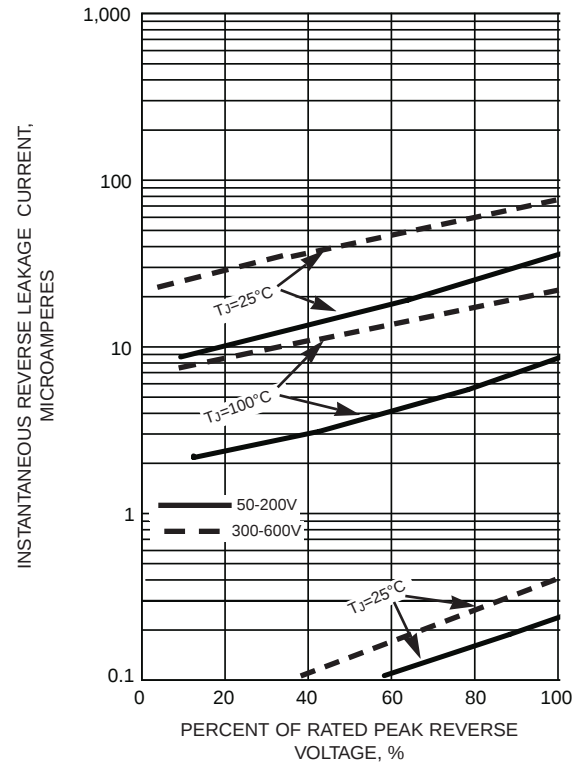


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

