

FEP30AP - FEP30JP

Dual Ultrafast Plastic Rectifiers

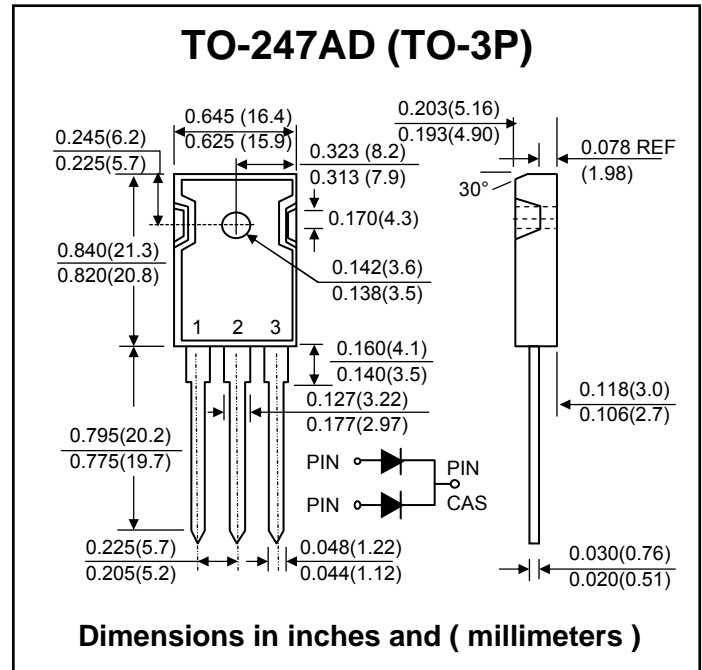
PRV : 50 - 600 Volts
Io : 30 Ampere

FEATURES :

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Dual rectifier construction, positive center-tap
- * Glass passivated chip junction
- * 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, 0.1"(4.06mm)from case for 10 seconds
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : TO-247AD Molded plastic
- * Polarity : As marked on the body
- * Mounting position : Any
- * Weight : 5.6 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise note.

RATING	SYMBOL	FEP 30AP	FEP 30BP	FEP 30CP	FEP 30DP	FEP 30FP	FEP 30G	FEP 30HP	FEP 30JP	UNIT
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, $T_c = 100^\circ\text{C}$	$I_{F(AV)}$	30								A
Maximum Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_c = 100^\circ\text{C}$	I_{FSM}	300								A
Maximum Instantaneous Forward Voltage at $I_F = 15\text{ A}$	V_F	0.95			1.3		1.5			V
Maximum Reverse Current at $T_c = 25^\circ\text{C}$	I_R	10								μA
Rated DC Blocking Voltage $T_c = 100^\circ\text{C}$	$I_{R(H)}$	500								μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35			50					ns
Typical junction capacitance at 4V, 1MHz	C_j	175						145		pF
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.2								$^\circ\text{C/W}$
Operating storage and temperature range	T_J, T_{STG}	- 55 to + 150								$^\circ\text{C}$

Note : (1) Reverse Recovery Test Conditions : $I_F = 0.5\text{A}$, $I_R = 1\text{A}$; $I_{rr} = 0.25\text{ A}$

RATING AND CHARACTERISTIC CURVES (FEP30AP ~ FEP30JP)

FIG.1 - FORWARD CURRENT DERATING CURRENT

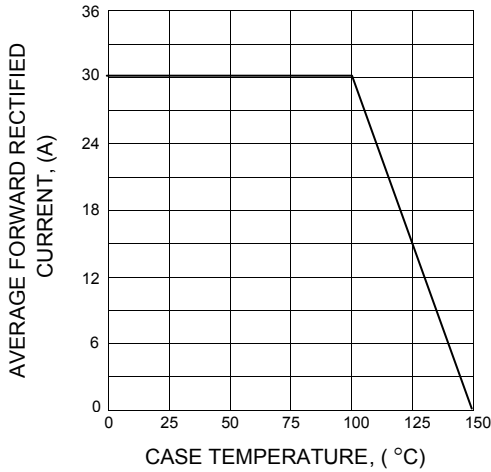


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

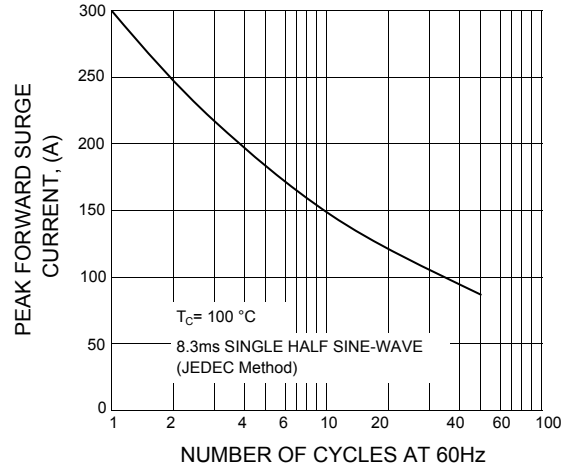


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

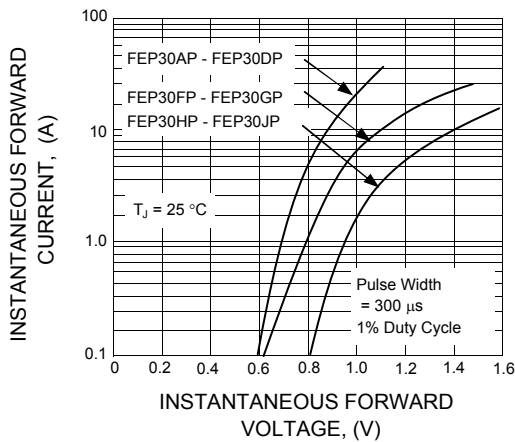


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

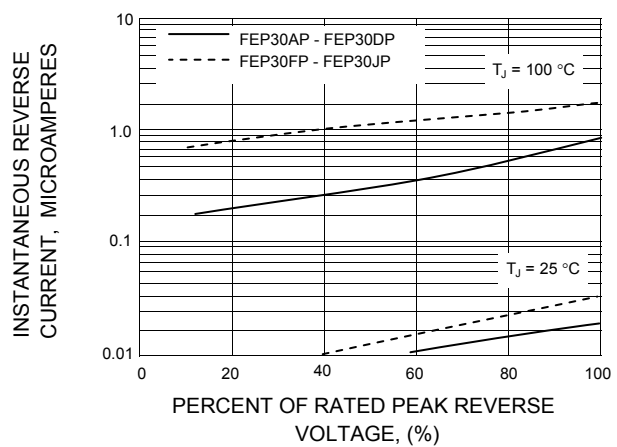


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

