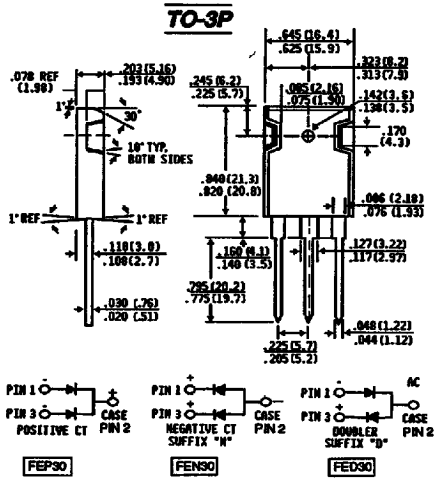
T-03-19

FEP30AP THRU FEP30JP

FAST EFFICIENT GLASS PASSIVATED RECTIFIER

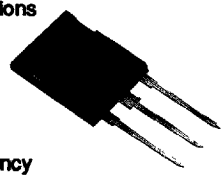
***Voltage** - 50 to 600 Volts **Current** - 30.0 Amperes*

FEATURES



Dimensions in inches and (millimeters)

- Dual rectifier construction, positive centertap
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junctions
- Superfast recovery times, high voltage
- Low forward voltage, high current capability
- Low thermal resistance
- Low power loss, high efficiency
- High temperature soldering guaranteed: 250°C,.17", (4.3mm) from case for 10 seconds



MECHANICAL DATA

Case: JEDEC TO-3P molded plastic

Terminals: Plated Lead solderable per MIL-STD-202, Method 208

Polarity: As marked

Mounting Position: Any

Weight: 0.2 ounce, 5.6 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Resistive or inductive load.
For capacitive load, derate current by 20%.

	SYMBOLS	FEP 30AP	FEP 30BP	FEP 30CP	FEP 30DP	FEP 30FP	FEP 30GP	FEP 30HP	FEP 30JP	UNITS
Maximum Recurrent 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)	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 T_C=25°C at Rated DC Blocking Voltage T_C= 100°C	I_R	10.0 500.0								µA
Maximum Reverse Recovery Time (NOTE 2) per leg T_J=25°C	T_{RR}	35.0				50.0				nS
Typical Junction Capacitance per leg (NOTE 1)	C_J	175.0						145.0		pf
Typical Thermal Resistance (NOTE 3)	RΘJC	1.0								°C/W
Operating and Storage Temperature Range	T_J,T_{STG}	-65 to +150								°C

NOTES:
1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, recover to 0.25A.
3. Thermal Resistance from Junction to Case per leg.

RATINGS AND CHARACTERISTIC CURVES FEP30AP THRU FEP30JP

FIG. 1 — FORWARD CURRENT DERATING CURVE

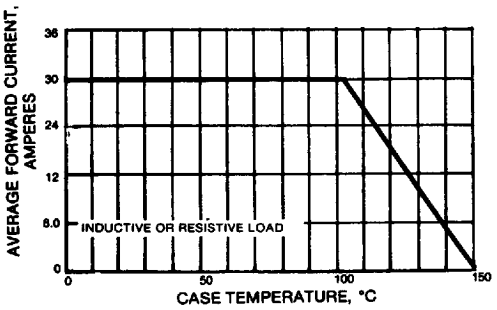


FIG. 2 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

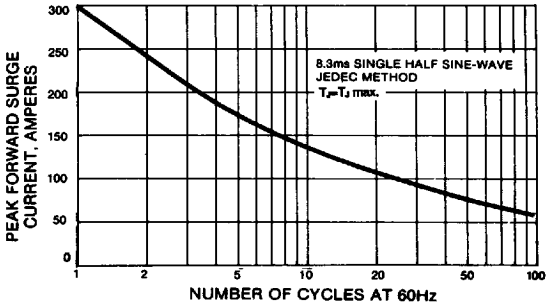


FIG. 3 — TYPICAL REVERSE CHARACTERISTICS PER LEG

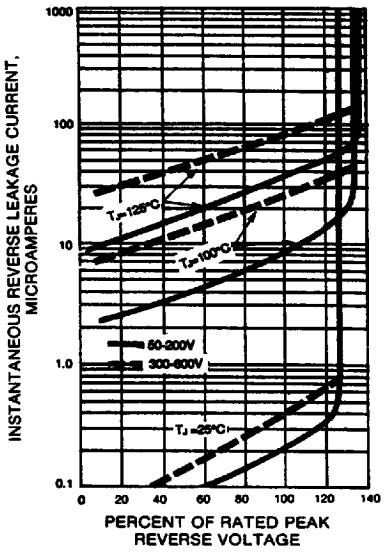


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

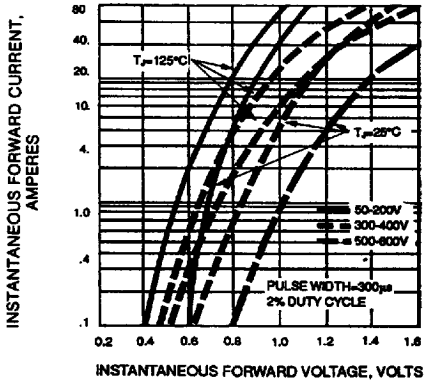


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG