THINKI SEMICONDUCTOR ®

Pb Free Plating Product

FEN30DP thru FEN30JP

RoHS Pb

30.0 Ampere Dual Fast Efficient Negative Polarity Power Rectifiers

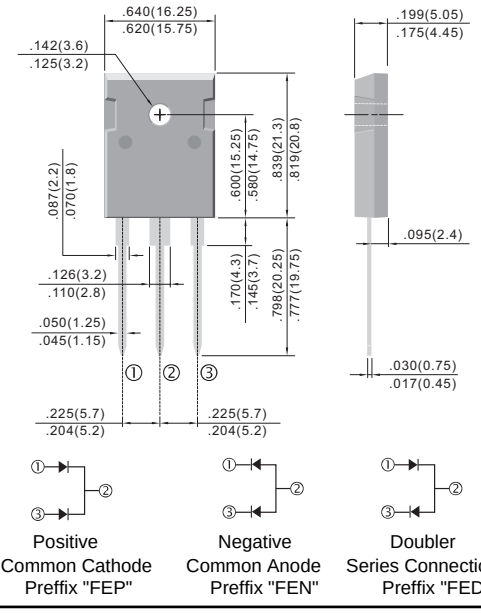
Features

- ✧ Dual rectifier construction, positive center-tap
- ✧ Plastic package has Underwriters Laboratory Flammability Classification 94V0
- ✧ Glass passivated chip junctions
- ✧ Ultrafast recovery time, high voltage
- ✧ Low forward voltage, high current capability
- ✧ Low thermal resistance
- ✧ Low power loss, high efficiency
- ✧ High temperature soldering guaranteed: 260°C, 0.16"(4.06mm)from case for 10 seconds

Mechanical Data

- ✧ Cases: TO-3P/TO-247AD molded plastic
- ✧ Terminals: Pure tin plated, lead free solderable per MIL-STD-750. Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 10in-lbs. Max.
- ✧ Weight: 0.2 ounce, 5.6 gram approximately

TO-3P/TO-247AD Unit: inch (mm)



Positive Common Cathode Preffix "FEP"

Negative Common Anode Preffix "FEN"

Doubler Series Connection Preffix "FED"

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	SYMBOL	FEP30DP FEN30DP FED30DP	FEP30GP FEN30GP FED30GP	FEP30JP FEN30JP FED30JP	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	400	600	V
Maximum RMS Voltage	V_{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	V
Maximum Average Forward Rectified Current T_C=125°C	$I_{F(AV)}$	30.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300			A
Maximum Instantaneous Forward Voltage @ 15.0 A	V_F	0.98	1.3	1.7	V
Maximum DC Reverse Current @T_J=25°C At Rated DC Blocking Voltage @T_J=125°C	I_R	10 500			uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	60			nS
Typical junction Capacitance (Note 2)	C_J	150			pF
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150			°C

NOTES : (1) Reverse recovery test conditions I_F = 0.5A I_R = 1.0A Irr = 0.25A.
(2) Thermal Resistance junction to terminal.
(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

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FIG.1 - FORWARD CURRENT DERATING CURVE

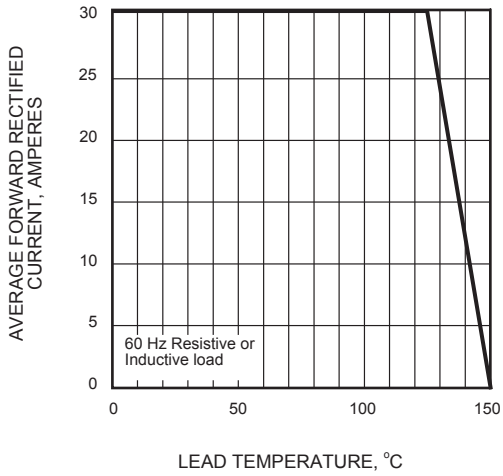


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

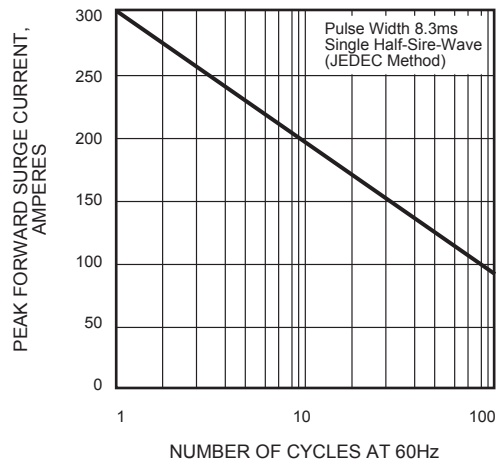


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

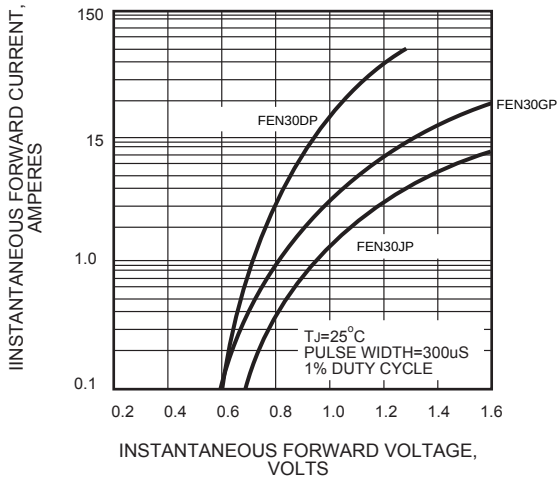


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

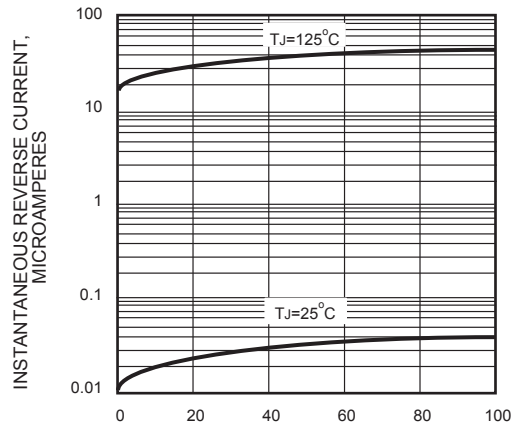
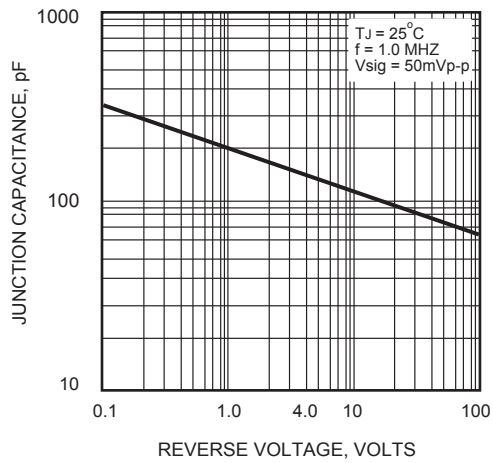


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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