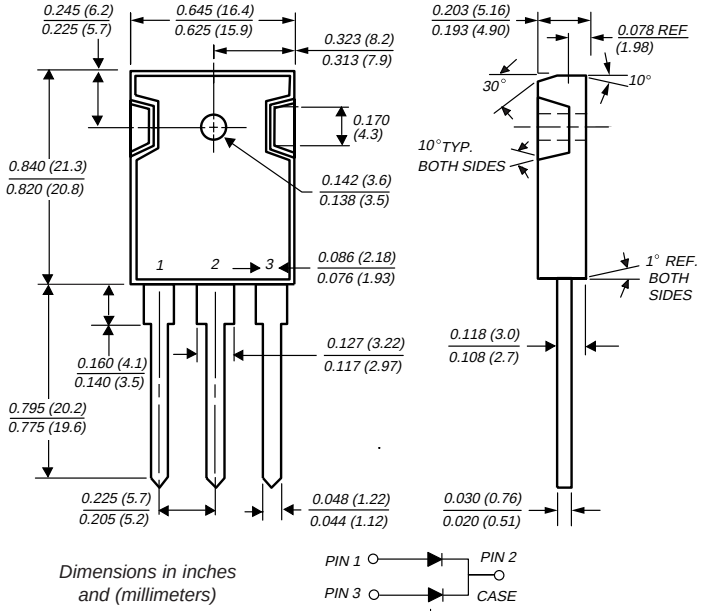
Vishay Semiconductors
formerly General Semiconductor

Dual Ultrafast Plastic Rectifier

Reverse Voltage 50 to 600 V
Forward Current 30 A

TO-247AD (TO-3P)



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 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 oz., 6.3 g

Maximum Ratings and Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise noted.

Parameter	Symbol	FEP 30AP	FEP 30BP	FEP 30CP	FEP 30DP	FEP 30FP	FEP 30GP	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 at T_C = 100°C	$I_{F(AV)}$	30								A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) at T_C = 100°C	I_{FSM}	300								A
Typical thermal reisistance (1)	$R_{\Theta JC}$	1.0								°C/W
Operating storage and temperature range	T_J, T_{STG}	-55 to +150								°C/W

Electrical Characteristics

Parameter	Symbol	FEP 30AP	FEP 30BP	FEP 30CP	FEP 30DP	FEP 30FP	FEP 30GP	FEP 30HP	FEP 30JP	Unit
Maximum instantaneous forward voltage per leg at 15.0 A	V_F	0.95				1.3		1.5		V
Maximum DC reverse current at T_C = 25°C rated DC blocking voltage T_C = 100°C	I_R	10 500								µA
Maximum reverse recovery time per leg at I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A	t_{rr}	35				50				ns
Typical junction capacitance per leg at 4.0V, 1MHz	C_J	175						145		pF

Notes: (1) Thermal resistance from junction to case per leg mounted on heatsink

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

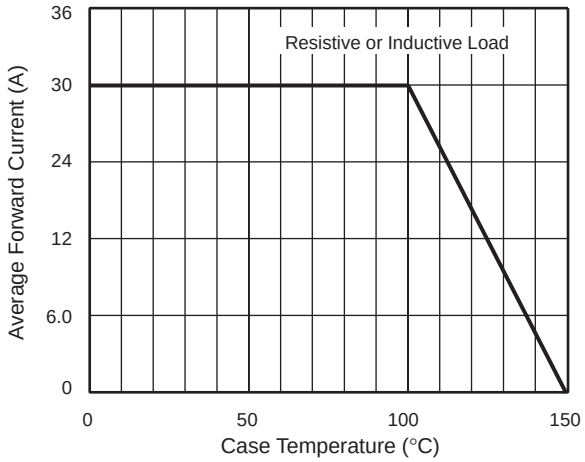


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

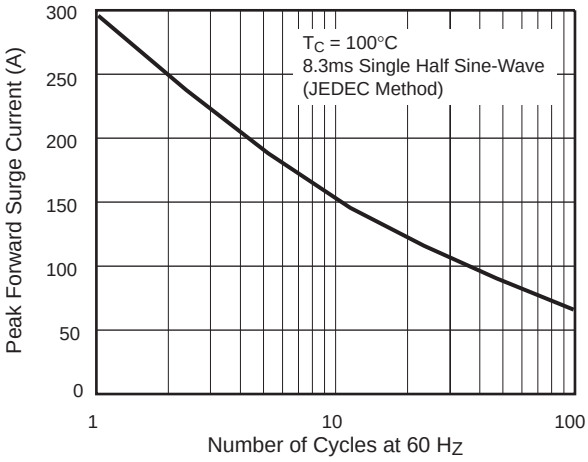


Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg

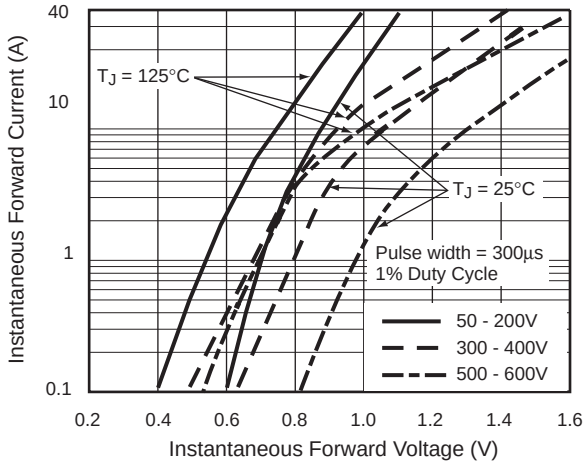


Fig. 4 – Typical Reverse Characteristics Per Leg

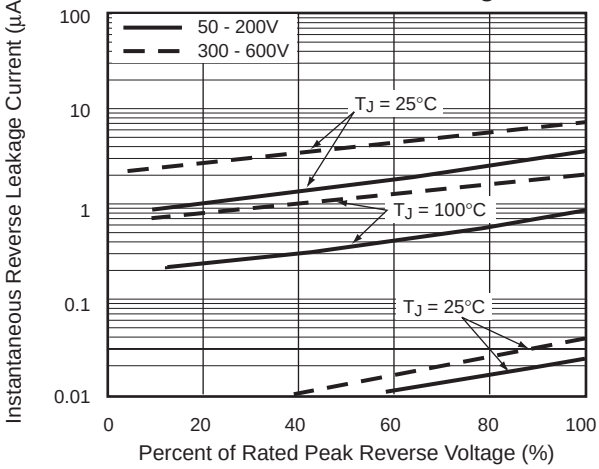
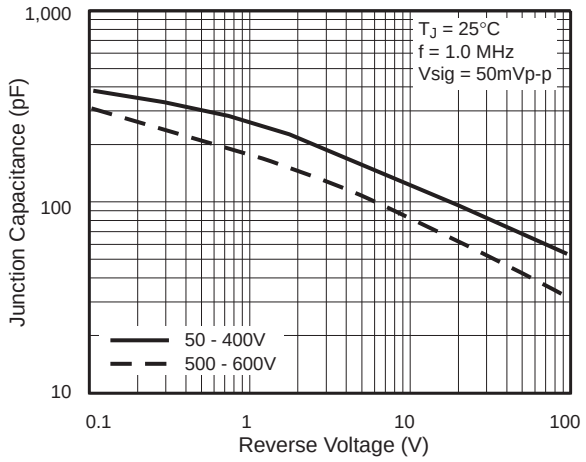


Fig. 5 – Typical Junction Capacitance



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