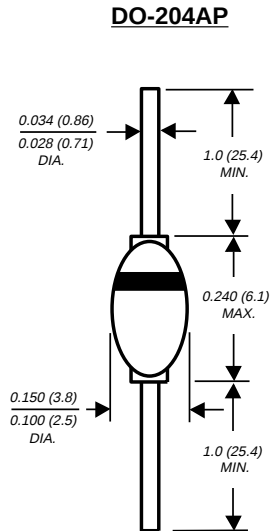


FE1A THRU FE1D

GLASS PASSIVATED FAST EFFICIENT RECTIFIER

Reverse Voltage - 50 to 200 Volts Forward Current - 1.0 Ampere

PATENTED *



Dimensions in inches and (millimeters)

* Brazed lead assembly is covered by Patent No. 3,390,306

FEATURES

- ♦ High temperature metallurgically bonded construction
- ♦ Glass passivated cavity-free junction
- ♦ Superfast recovery time for high efficiency
- ♦ Low forward voltage, high current capability
- ♦ Capable of meeting environmental standards of MIL-S-19500
- ♦ Hermetically sealed package
- ♦ Low leakage current
- ♦ High surge current capability
- ♦ High temperature soldering guaranteed:
350°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-204AP solid glass body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.02 ounce, 0.56 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	FE1A	FE1B	FE1C	FE1D	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	Volts
Maximum RMS voltage	V _{RMS}	35	70	105	140	Volts
Maximum DC blocking voltage	V _{DC}	50	100	150	200	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A =75°C	I _(AV)	1.0				Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	30.0				Amps
Maximum instantaneous forward voltage at 1.0A	V _F	0.95				Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	2.0 50.0				µA
Maximum reverse recovery time (NOTE 1)	t _{rr}	35.0				ns
Typical junction capacitance (NOTE 2)	C _J	45.0				pF
Typical thermal resistance (NOTE 3)	R _{θJA} R _{θJL}	65.0 20.0				°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175				°C

NOTES:

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

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

(3) Thermal resistance from junction to ambient and/or lead, 0.375" (9.5mm) lead length mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads

RATINGS AND CHARACTERISTIC CURVES FE1A THRU FE1D

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

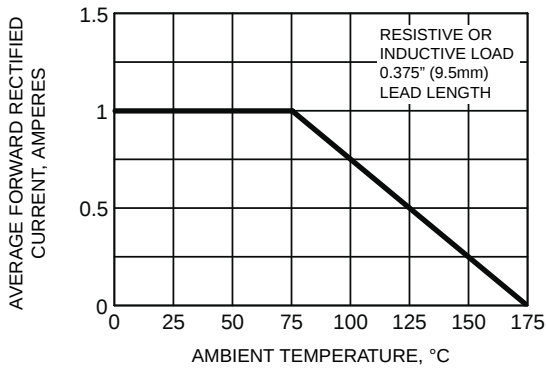


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

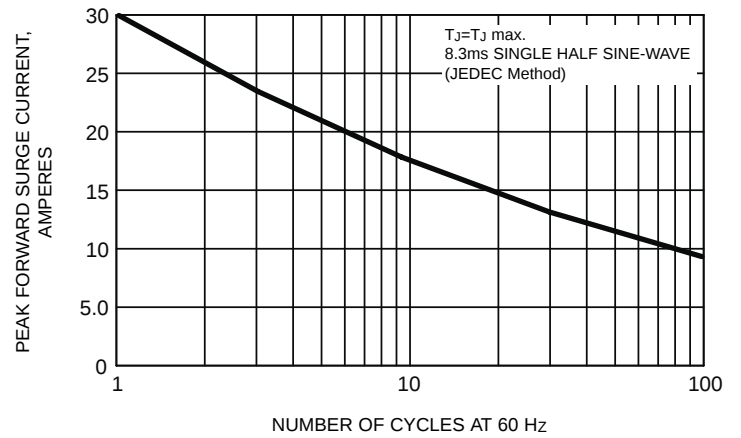


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

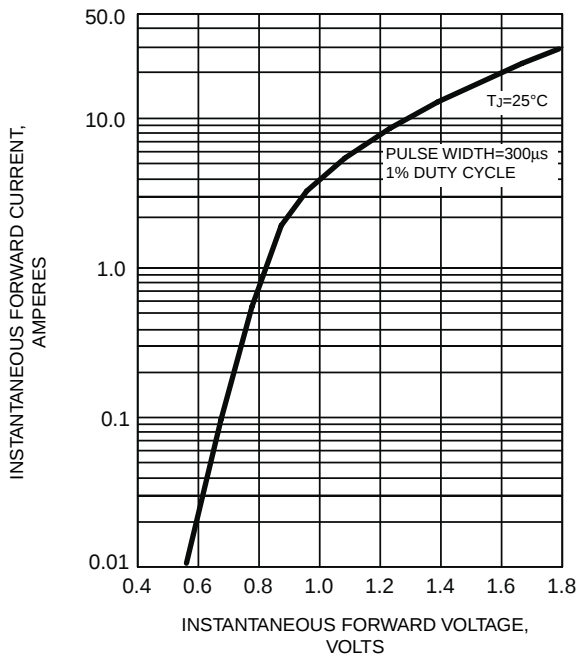


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

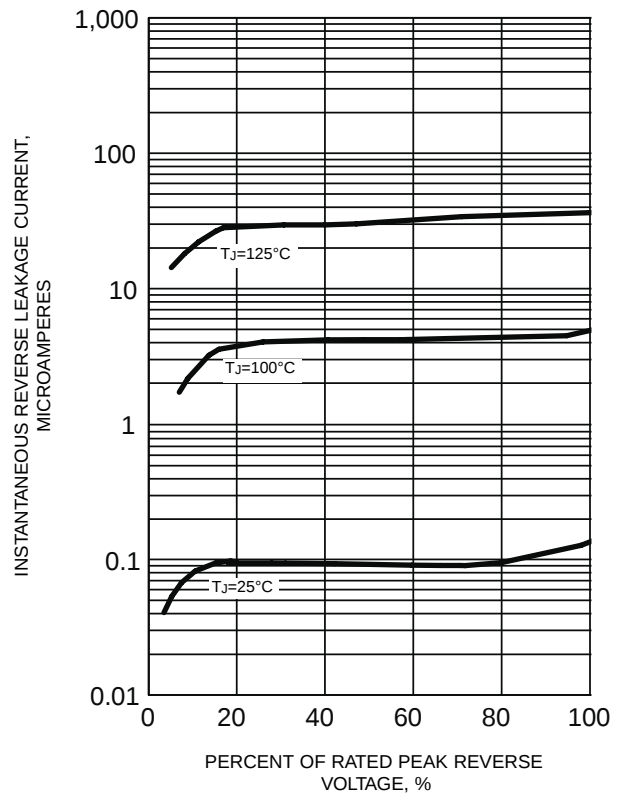


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

