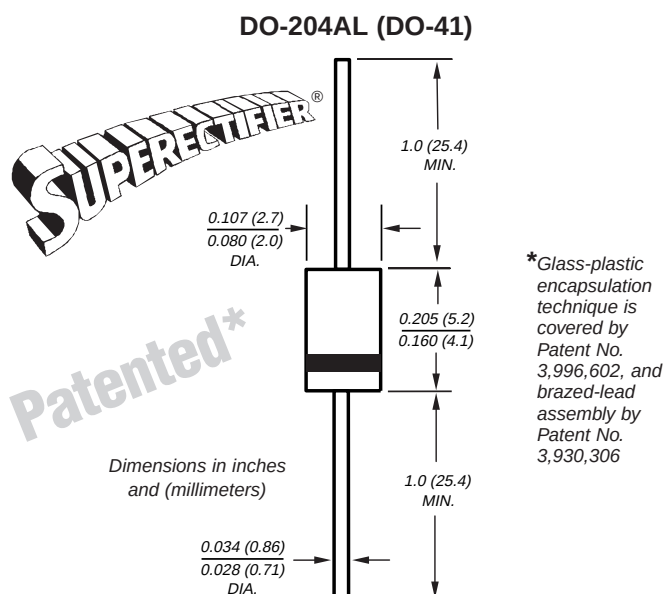




Glass Passivated Ultrafast Rectifier

Reverse Voltage 600V
Forward Current 1.0A

Features

- High temperature metallurgically bonded construction
- Cavity-free glass passivated junction
- Ultrafast 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
- Specified reverse surge 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-204AL, molded plastic over glass body**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026**Polarity:** Color band denotes cathode end**Mounting Position:** Any **Weight:** 0.012 oz., 0.3 gMaximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	600	V
Maximum RMS voltage	V _{RMS}	420	V
Maximum DC blocking voltage	V _{DC}	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _L = 85°C (See Fig. 1)	I _{F(AV)}	1.0	A
Peak forward surge current 10ms single half sine-wave superimposed on rated load	I _{FSM}	30	A
Non repetitive peak reverse energy (Note 1)	E _{RSM}	5	mJ
Typical thermal resistance (Note 2,3)	R _{θJA} R _{θJL}	70 16	°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175	°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Minimum avalanche breakdown voltage at 100μA	V _{BR}	600	V
Maximum instantaneous forward voltage at 1.0A T _J = 25°C T _J = 175°C	V _F	2.5 1.3	V
Maximum DC reverse current at rated DC blocking voltage T _A = 25°C T _A = 165°C	I _R	5.0 150	μA
Max. reverse recovery time at I _F = 0.5A, I _R = 1.0A, I _{rr} = 0.25A	t _{rr}	30	ns
Maximum junction capacitance at 4.0V, 1MHz	C _J	45	pF
Maximum reverse recovery current slope at I _F = 1A, V _R = 30V, di _r /dt = -1A/μs	di _r /dt	7	A/μs

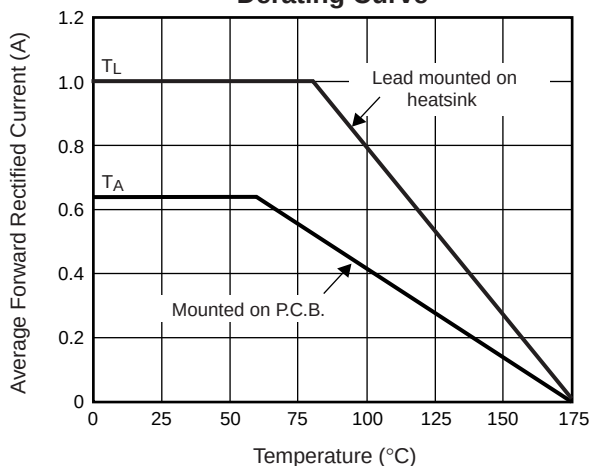
Notes: (1) Peak reverse energy measured with 8/20μs surge

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

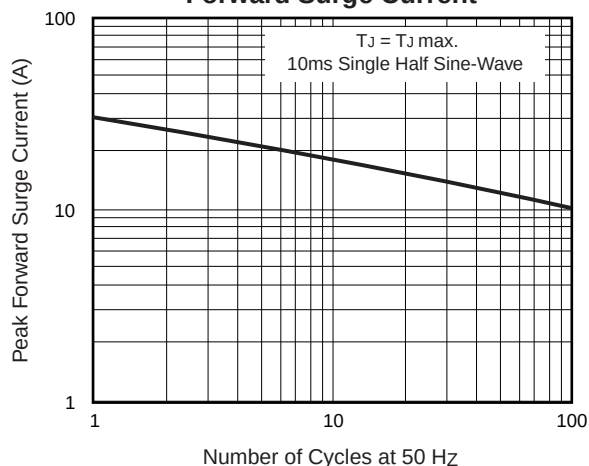
(3) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsink

**Ratings and
Characteristic Curves** ($T_A = 25^\circ\text{C}$ unless otherwise noted)

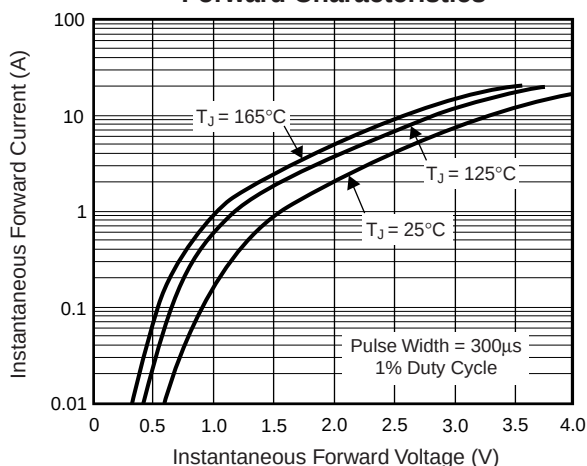
**Fig. 1 – Maximum Forward Current
Derating Curve**



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



**Fig. 3 – Typical Instantaneous
Forward Characteristics**



**Fig. 4 – Typical Reverse Leakage
Characteristics**

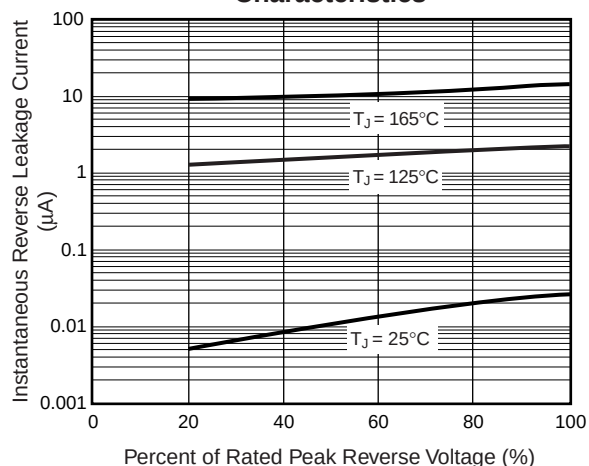
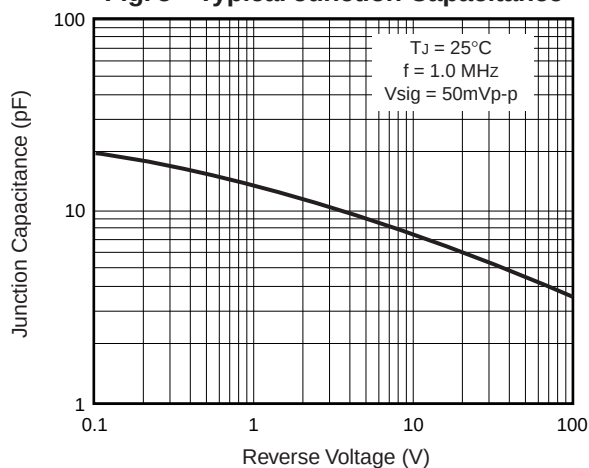


Fig. 5 – Typical Junction Capacitance



**Fig. 6 – Typical Transient Thermal
Impedance**

