

# AL01

**PRV : 400 Volts**  
**Io : 1.0 Ampere**

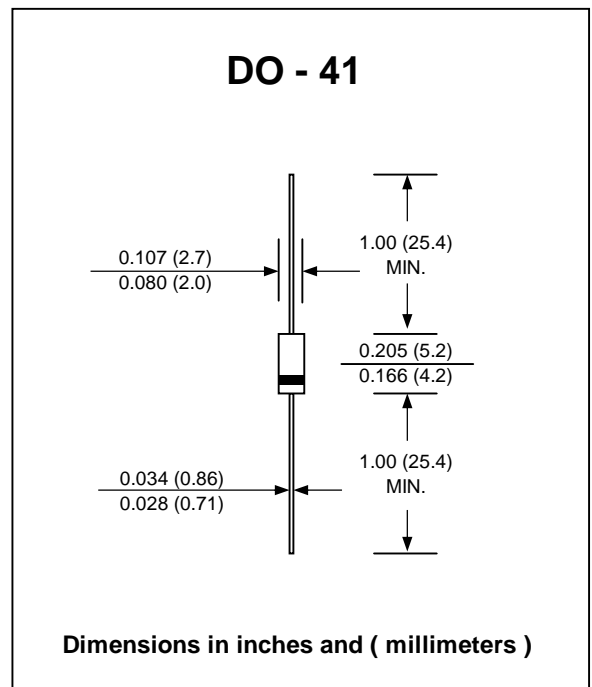
**FEATURES :**

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* **Pb / RoHS Free**

**MECHANICAL DATA :**

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.339 gram

## ULTRA FAST RECOVERY RECTIFIER DIODES



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

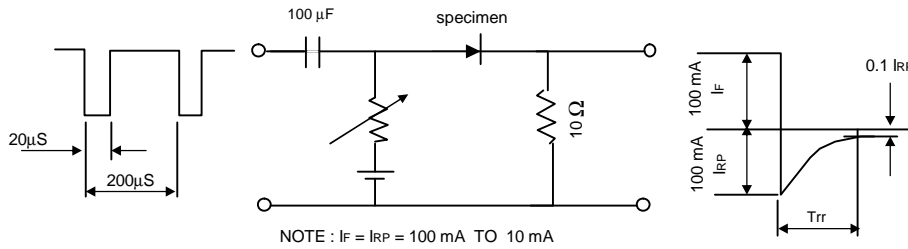
RATING	SYMBOL	VALUE	UNIT
Maximum Peak Reverse Voltage	V <sub>RM</sub>	400	V
Maximum Average Rectified Forward Current	I <sub>F(AV)</sub>	1	A
Maximum Peak Forward Surge Current ( 50 Hz, Half-cycle, Sine wave, Single Shot )	I <sub>FSM</sub>	20	A
Maximum Forward Voltage at I <sub>F</sub> = 1.0 A	V <sub>F</sub>	1.4	V
Maximum Reverse Current at Reverse voltage	I <sub>R</sub>	10	µA
Maximum Reverse Current at Reverse voltage T <sub>j</sub> = 150 °C	I <sub>R(H)</sub>	0.5	mA
Maximum Reverse Recovery Time ( Note 1 )	T <sub>rr</sub>	50	ns
Junction Temperature Range	T <sub>J</sub>	- 40 to + 150	°C
Storage Temperature Range	T <sub>STG</sub>	- 40 to + 150	°C

**Note:**

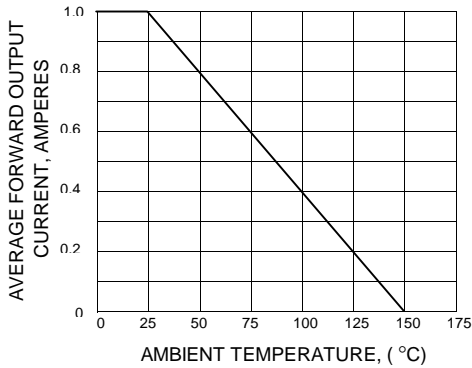
( 1 ) Reverse Recovery Test Conditions : I<sub>F</sub> = 100 mA, I<sub>RP</sub> = 100 mA.

**RATING AND CHARACTERISTIC CURVES ( AL01)**

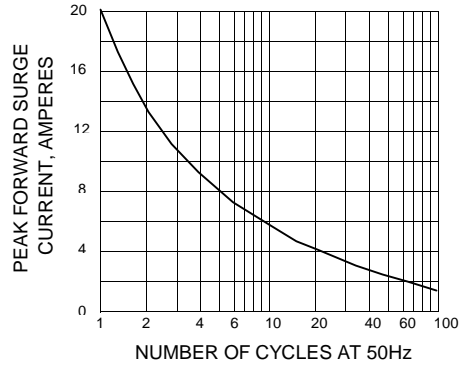
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**

