General Purpose Silicon Rectifier

Lumimax Optoelectronic Tech.

1N4001 ~ 1N4007

FEATURES

- Low forward voltage drop
- Low leakage current
- High forward surge current capability
- High temperature soldering guaranteed 260°C/10 seconds /.0375" (9.5mm) lead length
- RoHS and REACH Compliant

RoHS COMPLIANT

DO204AL (DO-41)

MECHANICAL DATA

Case	DO-41, transfer molded plastic
Epoxy	Meets UL 94V-0 flammability rating
Terminals	Plated axial leads, solderable per MIL-STD-202E, Method 208C
Polarity	Cathode indicated by color band
Mounting position	Any
Weight	0.012 Ounce, 0.33 gram

MAXIMUM RATINGS ($T_{Ambient}$=25°C unless noted otherwise)

Parameter *[Conditions]*	**Symbol**	**1N 4001**	**1N 4002**	**1N 4003**	**1N 4004**	**1N 4005**	**1N 4006**	**1N 4007**	**Unit**
Max Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Max RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Max DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Max Average Forward Rectified Current *[.0375" (9.5mm) lead length at T_A=75°C]*	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current *[8.3ms single half sine-wave (JEDEC)]*	I_{FSM}	30							A
Max Full Load Reverse Current *[Full cycle average .0375" (9.5mm) lead length]*	$I_{R(AV)}$	30							µA
Operating and Storage Temperature Range	T_J,T_{STG}	-50 to +150							°C

ELECTRICAL CHARACTERISTICS ($T_{Ambient}$=25°C unless noted otherwise)

Parameter *[Conditions]*	**Symbol**	**1N 4001**	**1N 4002**	**1N 4003**	**1N 4004**	**1N 4005**	**1N 4006**	**1N 4007**	**Unit**
Max Instantaneous Forward Voltage *[$I_{F(AV)}$=1.0A]*	V_F	1.1							V
Max DC Reverse Current at Rated DC Blocking Voltage *[T_A=25°C]*	I_R	5.0							µA
Max DC Reverse Current at Rated DC Blocking Voltage *[T_A=100°C]*	I_R	50							µA
Typical Junction Capacitance *[At 1MHz, reversed voltage of 4V]*	C_J	15							pF
Typical Thermal Resistance *[Note 2]*	$R_{\theta JA}$	50							°C/W

Note : (1) Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load

(2) Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted with copper pad area of 0.2" x 0.2" (5x5mm).

TYPICAL CHARACTERISTICS CURVES

Fig.1- Forward Current Derating Curve

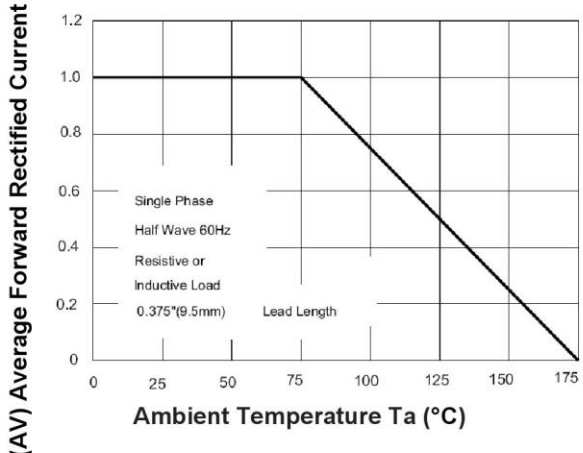


Fig.2- Max. Non-Repetitive Forward Surge Current

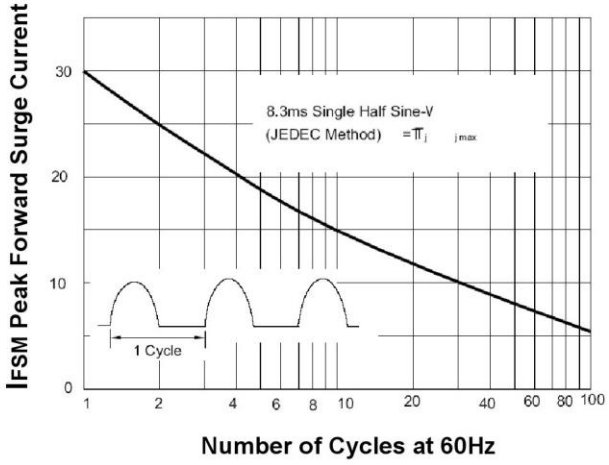


Fig.3- Typical Instantaneous Forward Characteristics

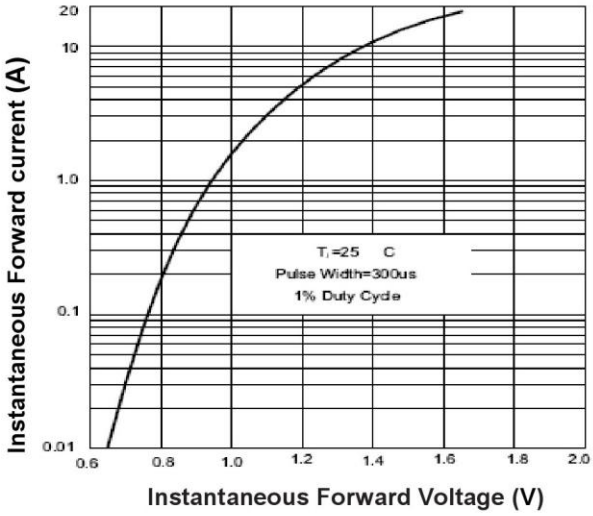


Fig.5- Typical Reverse Characteristics

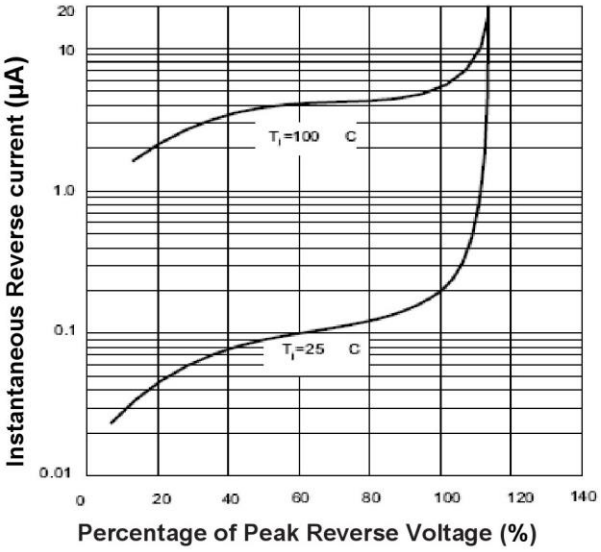
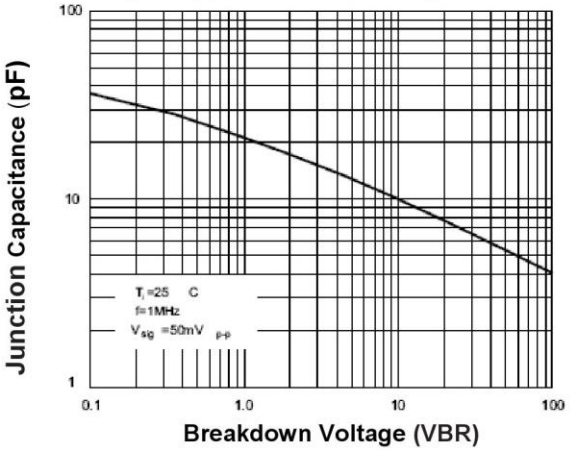
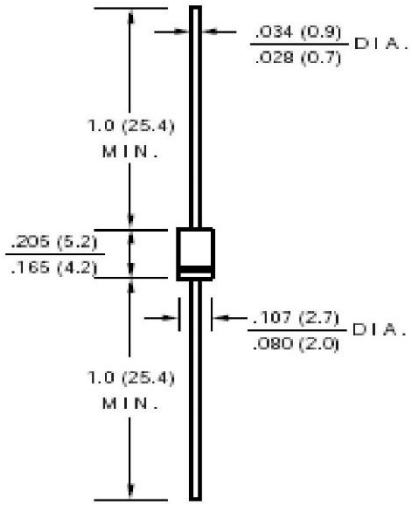


Fig.6- Typical Junction Capacitance



DIMENSIONS in inch (mm)



DO204AL
(DO-41)