

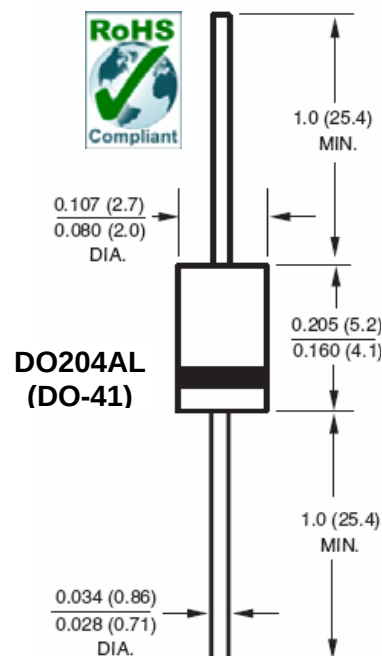
General Purpose Silicon Rectifier

Features

- Low forward voltage drop
- Low leakage current
- High forward surge current capability
- High temperature soldering guaranteed 265°C/10 seconds
/.037" (9.5mm) lead length, 5lbs (2.3kg) tension
- RoHS Compliant

Mechanical Data

Case:	DO-204AL, 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 ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Unit	Conditions
VRRM	Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
VRMS	Maximum RMS Voltage	35	70	140	280	420	560	700	V	
VDC	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
IF(AV)	Maximum Average Forward Rectified Current	1.0							A	.375" (9.5mm) lead length at $T_A = 75^{\circ}\text{C}$ note 1
IFSM	Peak Forward Surge Current	30							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
IR(AV)	Maximum Full Load Reverse Current	30							μA	Full cycle average .375" (9.5mm) lead length $T_L = 75^{\circ}\text{C}$
TJ, TSTG	Operating and Storage Temperature Range	-65 to +175							$^{\circ}\text{C}$	

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1N4001~1N4007

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	Unit	Conditions
V _F	Maximum Instantaneous Forward Voltage	1.1							V	I _F (AV)= 1.0 A
I _R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	T _A = 25 °C
		50								T _A = 100 °C
C _J	Typical Junction Capacitance	15							pf	at 1MHz, reversed voltage of 4V
R _{θ-JA}	Typical Thermal Resistance	50							° C/W	note 2

- Note:** 1. 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

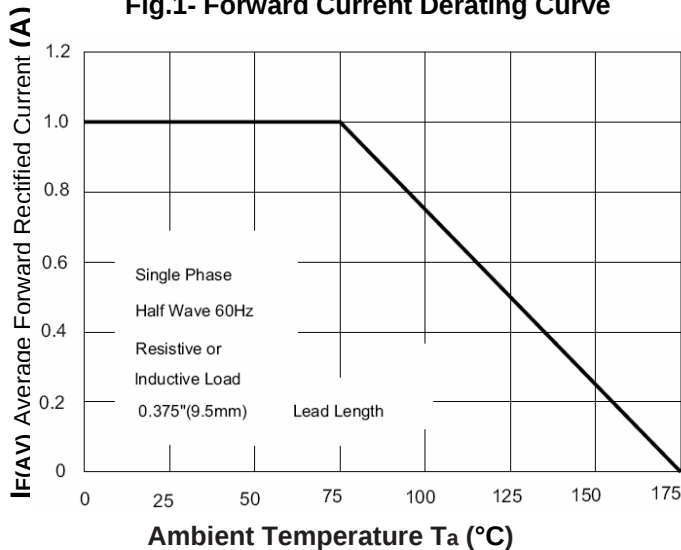
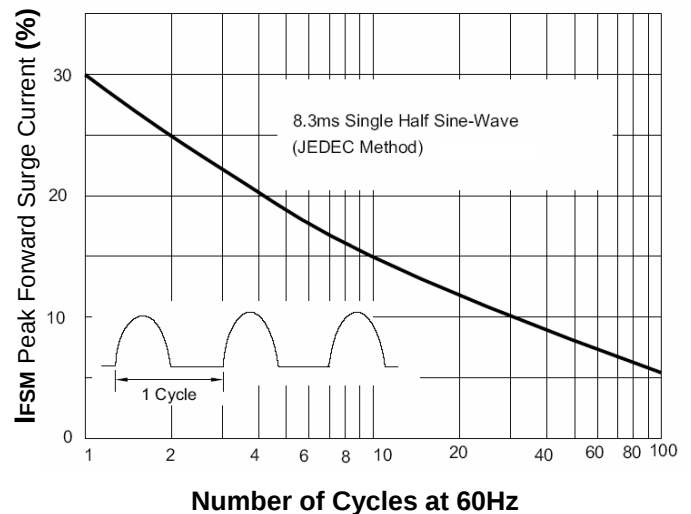


Fig.2- Max. Non-Repetitive Forward Surge Current



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Fig.3- Typical Instantaneous Forward Characteristics

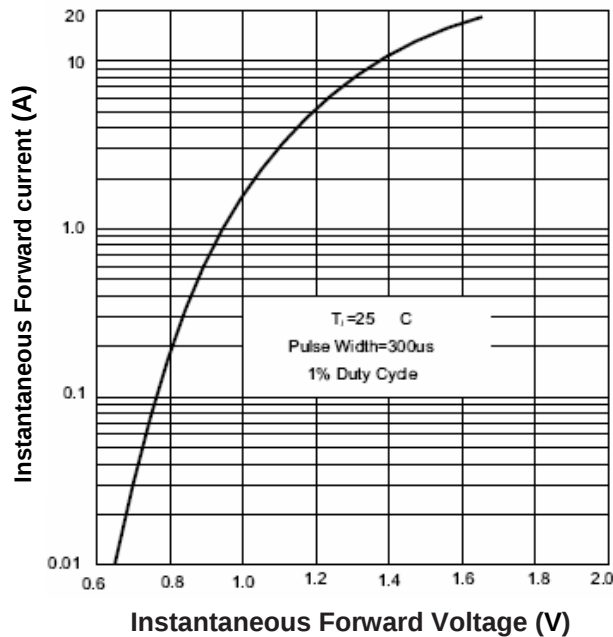


Fig.5- Typical Reverse Characteristics

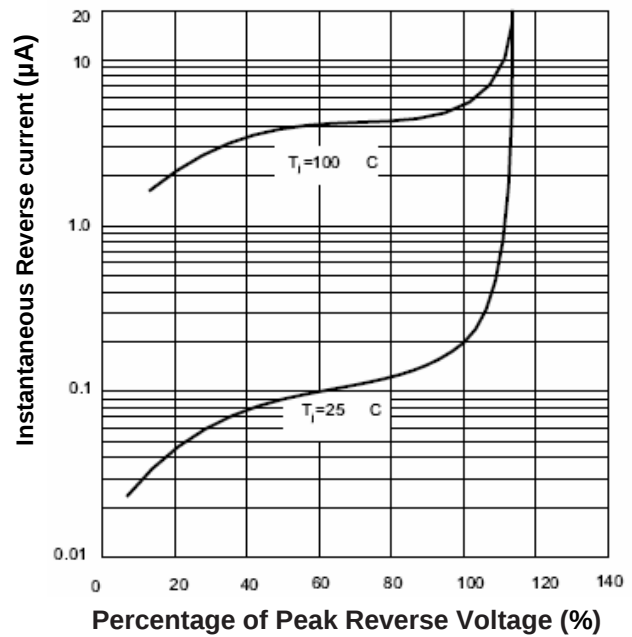
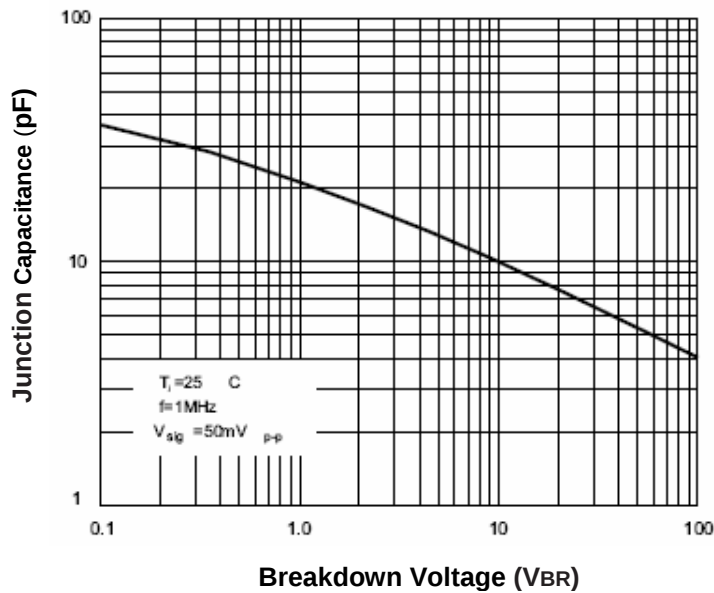


Fig.6- Typical Junction Capacitance



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