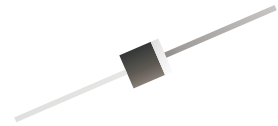


## FR601-G Thru. FR607-G

Voltage: 50 to 1000 V

Current: 6.0 A

RoHS Device

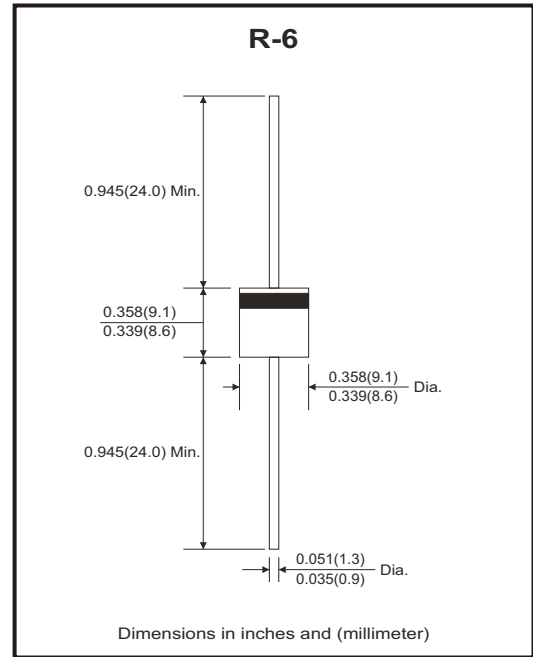


### Features

- Open junction chip.
- Low reverse leakage.
- High forward surge current capability.
- High temperature soldering guaranteed 250°C/10 seconds at terminals.

### Mechanical data

- Epoxy: UL 94V-0 rate flame retardant
- Case: R-6, molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode.
- Mounting position: Any.



### Circuit Diagram



### Maximum Ratings and Electrical Characteristics

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

Parameter	Symbol	FR601 -G	FR602 -G	FR603 -G	FR604 -G	FR605 -G	FR606 -G	FR607 -G	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	$I_{(AV)}$	6.0							A
Peak forward surge current, 8.3ms single half sine-wave super imposed on rated load	$I_{FSM}$	200							A
Max. instantaneous forward voltage at 6.0A	$V_F$	1.3							V
Max. DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	10 500							$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{rr}$	150				250	500		nS
Typical junction capacitance (Note 2)	$C_J$	100							pF
Typical thermal resistance	$R_{\theta JA}$	40							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 ~ +150							$^\circ\text{C}$

Notes: 1. Reverse recovery time test condition:  $I_F=0.5\text{A}$   $I_R=1\text{A}$   $I_{rr}=0.25\text{A}$ .  
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

## Rating and Characteristic Curves (FR601-G Thru. FR607-G)

Fig.1 - Derating Curve Output Rectified Current

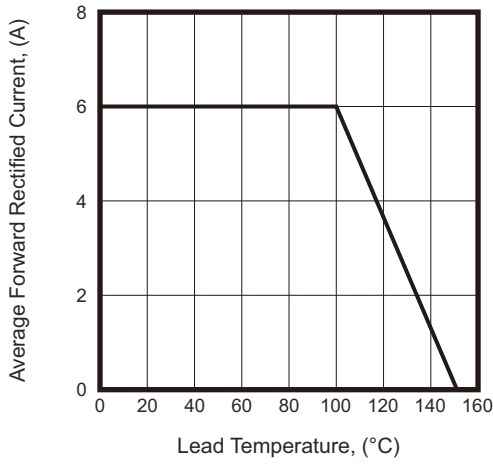


Fig.2 - Max. Non-Repetitive Peak Forward Surge Current Per Leg

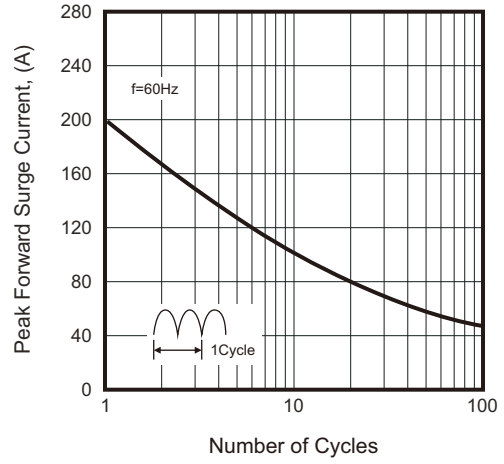


Fig.3 - Typical Forward Voltage Characteristics

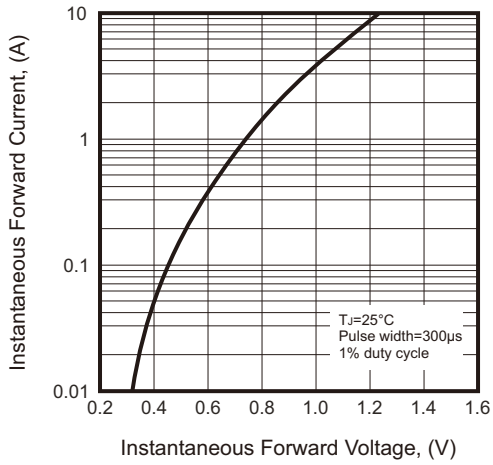
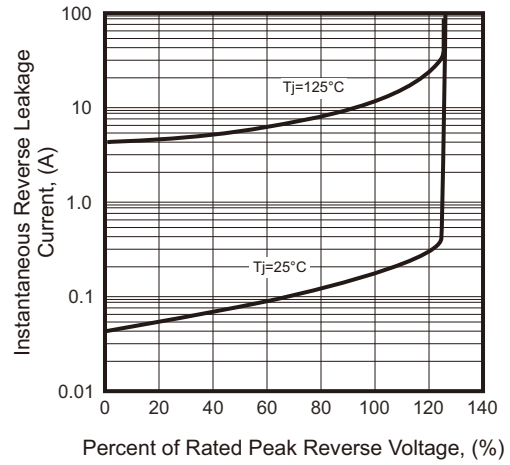
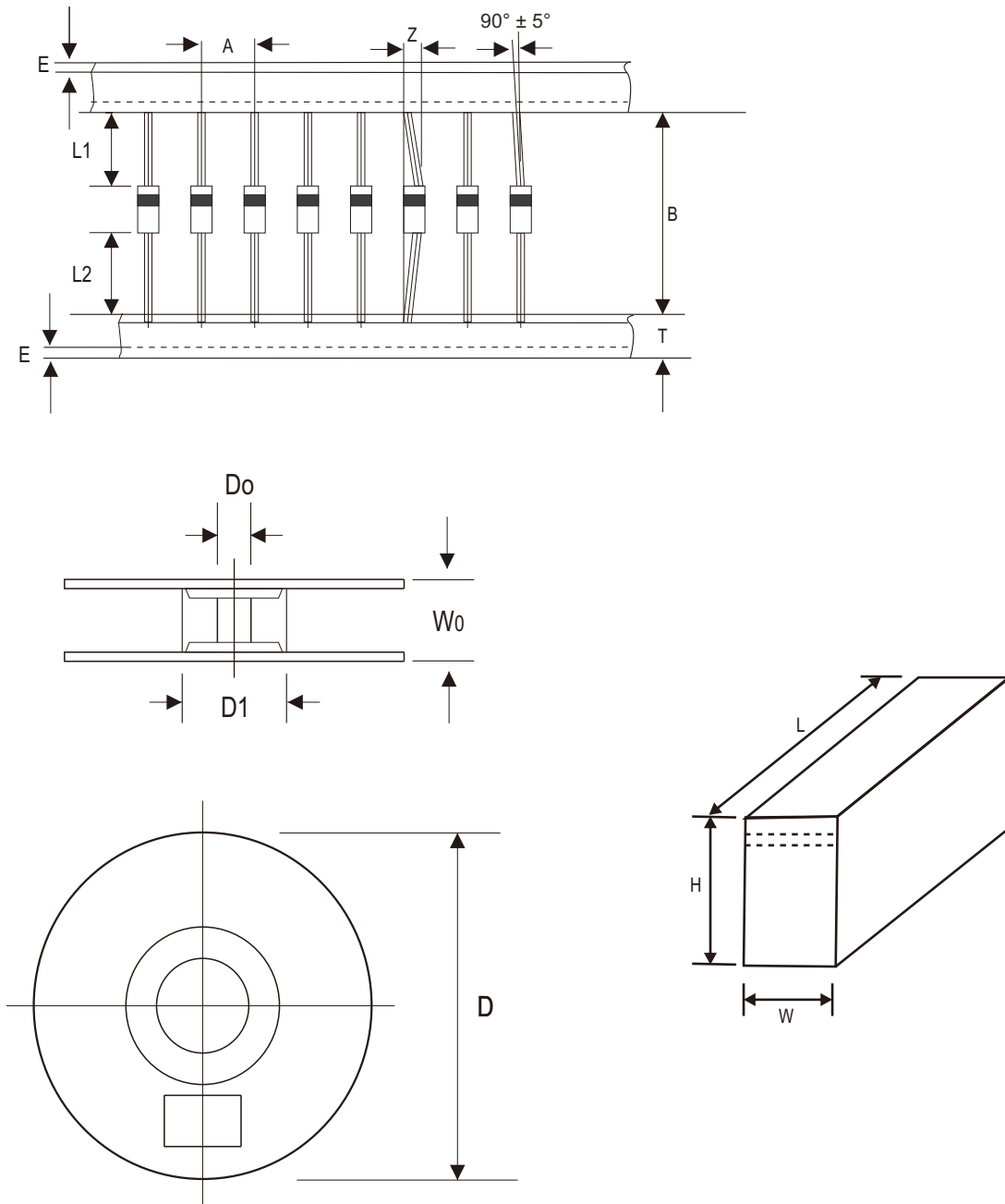


Fig.4 - Typical Reverse Leakage Characteristics



## Taping Specification For Axial Lead Diodes



R-6	SYMBOL	A	B	Z	T	E	L1-L2
	(mm)	$10.00 \pm 0.50$	$52.40 + 1.50 - 0.40$	1.20 (max)	$6.00 \pm 0.40$	0.80 (max)	1.00 (max)
	(inch)	$0.394 \pm 0.020$	$2.063 + 0.059 - 0.016$	0.047 (max)	$0.236 \pm 0.016$	0.031 (max)	0.039 (max)

R-6	SYMBOL	D1	D0	D	W0	L	W	H
	(mm)	$85.70 \pm 0.30$	$16.60 \pm 0.40$	330.00	$79.00 \pm 1.00$	$255.00 \pm 5.00$	$75.00 \pm 5.00$	$150.00 \pm 5.00$
	(inch)	$3.374 \pm 0.012$	$0.654 \pm 0.016$	12.992	$3.110 \pm 0.039$	$10.039 \pm 0.197$	$2.953 \pm 0.197$	$5.906 \pm 0.197$

Company reserves the right to improve product design , functions and reliability without notice.

REV:C