

FR601-G Thru. FR607-G

Voltage: 50 to 1000 V

Current: 6.0 A

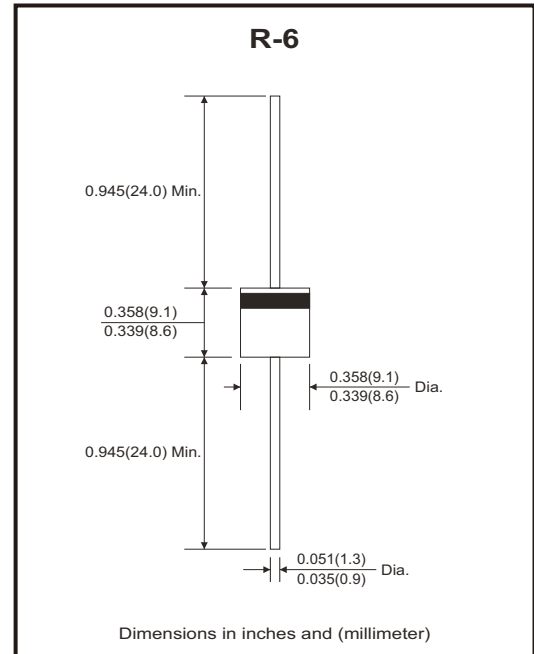
RoHS Device

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°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°C at rated DC blocking voltage T _A =125°C	I _R	10 500							μA
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 _{θJA}	40							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 ~ +150							°C

Notes: 1. Reverse recovery time test condition: $I_F=0.5\text{A}$ $I_R=1\text{A}$ $t_{rr}=0.25\text{A}$.

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

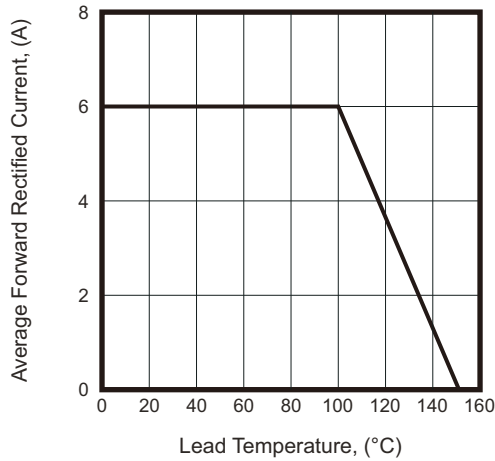


Fig.2 - Max. Non-Repetitive Peak Forward Surge Current Per Leg

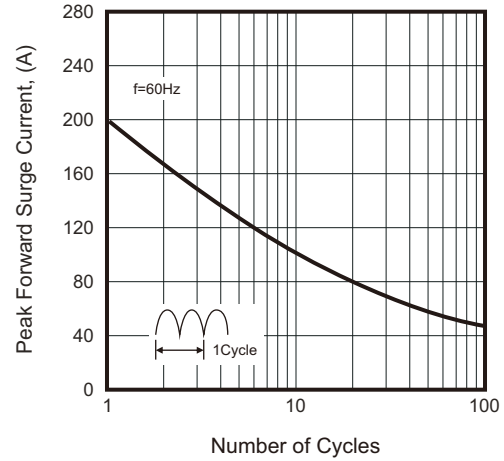


Fig.3 - Typical Forward Voltage Characteristics

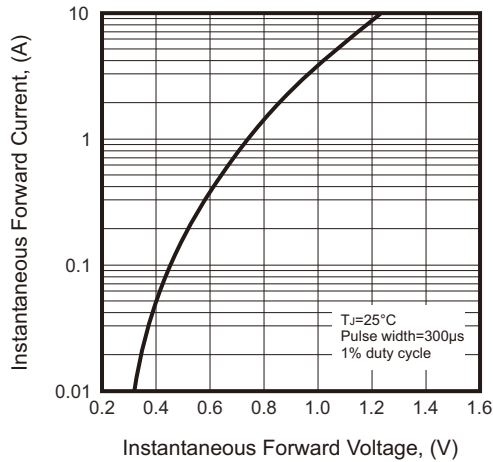
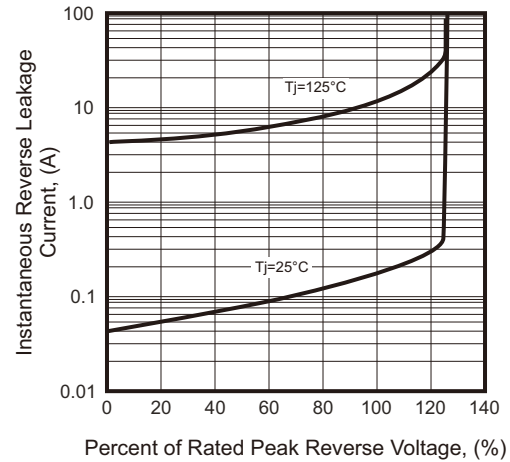
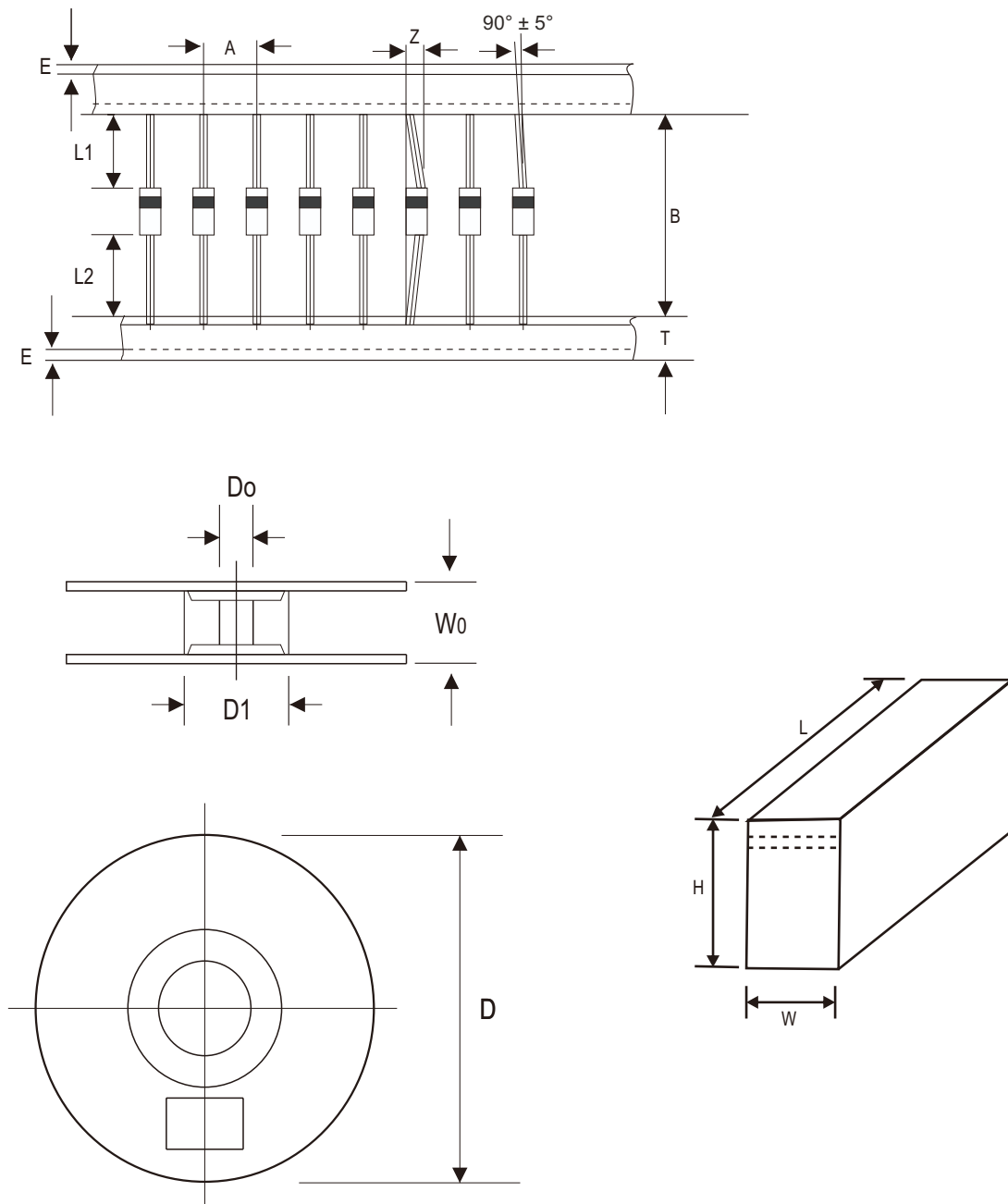


Fig.4 - Typical Reverse Leakage Characteristics



Taping Specification For Axial Lead Diodes



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

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

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

REV:C

Marking Code

Part Number	Marking code	Packaging
FR601A-G	FR601	AMMO
FR602A-G	FR602	AMMO
FR603A-G	FR603	AMMO
FR604A-G	FR604	AMMO
FR605A-G	FR605	AMMO
FR606A-G	FR606	AMMO
FR607A-G	FR607	AMMO
FR601T-G	FR601	REEL
FR602T-G	FR602	REEL
FR603T-G	FR603	REEL
FR604T-G	FR604	REEL
FR605T-G	FR605	REEL
FR606T-G	FR606	REEL
FR607T-G	FR607	REEL
FR601B-G	FR601	BULK
FR602B-G	FR602	BULK
FR603B-G	FR603	BULK
FR604B-G	FR604	BULK
FR605B-G	FR605	BULK
FR606B-G	FR606	BULK
FR607B-G	FR607	BULK



XXX = Product type marking code

Note:

1) Suffix code after part number to specify packaging item .

Packaging	Code
AMMO PACK	A
REEL PACK	T
BULK PACK	B

Standard Packaging

Case Type	AMMO PACK
	BOX (pcs)
R-6	500

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
R-6	500	13

Case Type	BULK PACK
	BOX (pcs)
R-6	200

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