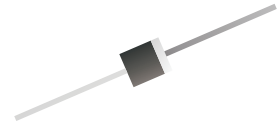


FR601-G Thru. FR607-G

Voltage: 50 to 1000 V

Current: 6.0 A

RoHS Device

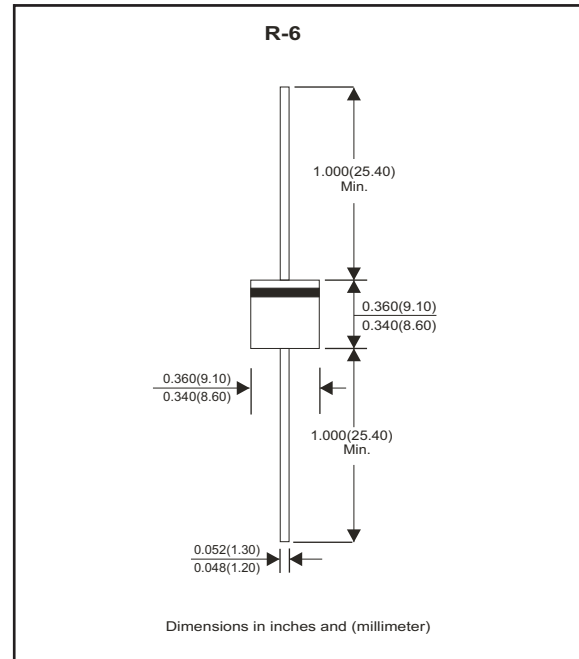


Features

- Fast switching for high efficiency.
- Diffused junction.
- Low reverse leakage current.
- Low forward voltage drop
- High current capability.

Mechanical data

- Case: JEDEC R-6 molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode
- Lead: Plated axial lead, solderable per MIL-STD-705, method 2026
- Mounting position: Any
- Weight: 2.1 grams(approx).



Circuit Diagram



Maximum Ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

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 @T _A =75°C	I _(AV)	6.0							A
Peak forward surge current, 8.3ms single half sine-wave super imposed on rated load (JEDEC method)	I _{FSM}	300							A
Maximum reverse recovery time (Note 1)	t _{rr}	150				250	500		nS
Operating temperature range	T _J	-55 ~ +150							°C
Storage temperature range	T _{STG}	-55 ~ +150							°C

NOTES:

1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$.

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 6.0\text{A DC}$	V_F			1.3	V
DC reverse current at rated DC blocking voltage	$T_J = 25^{\circ}\text{C}$	I_R			5.0	μA
	$T_J = 100^{\circ}\text{C}$				100	
Junction capacitance	$V_R = 4\text{V}, f = 1.0\text{MHz}$	FR601-G/FR602-G FR603-G/FR604-G		140		pF
		FR605-G/FR606-G FR607-G		70		pF
Thermal resistance	Junction to ambient	$R_{\theta JA}$		32		$^{\circ}\text{C/W}$

RATING AND CHARACTERISTIC CURVES (FR601-G Thru. FR607-G)

Fig.1 - Forward Current Derating Curve

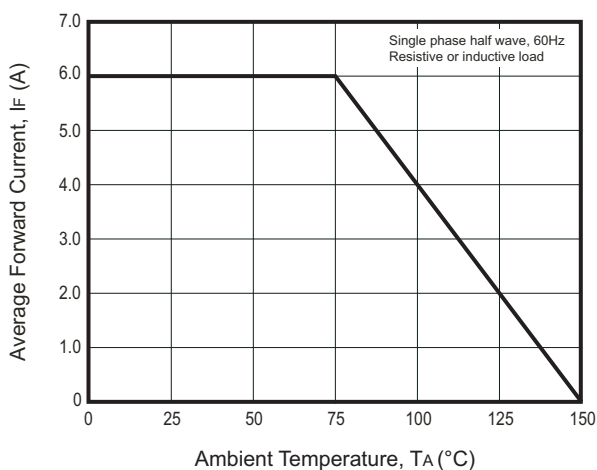


Fig.2 - Maximum Non-repetitive Peak Forward Surge Current

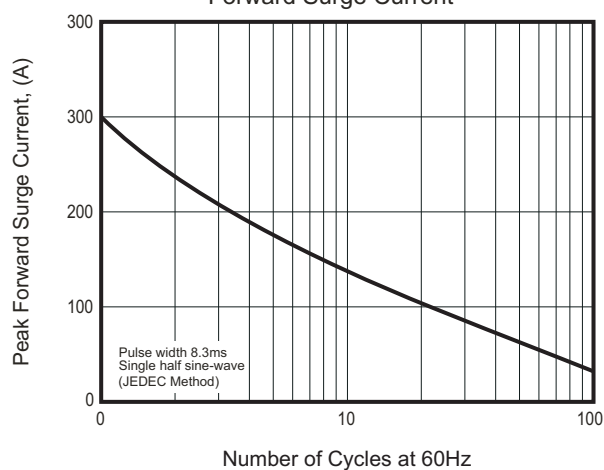


Fig.3 - Typical Junction Capacitance

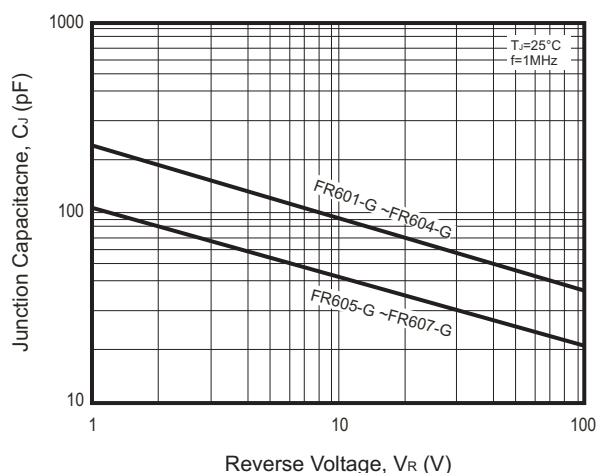
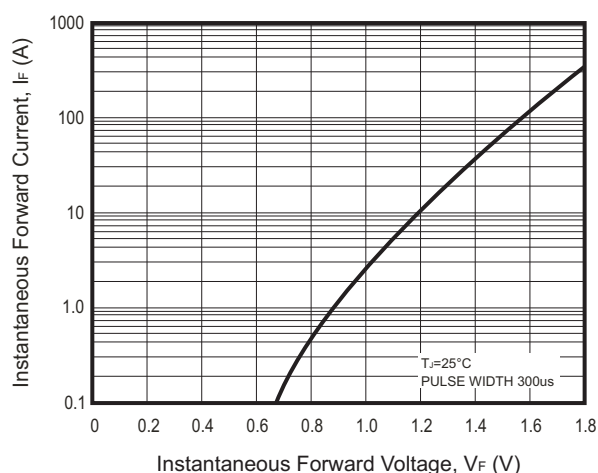
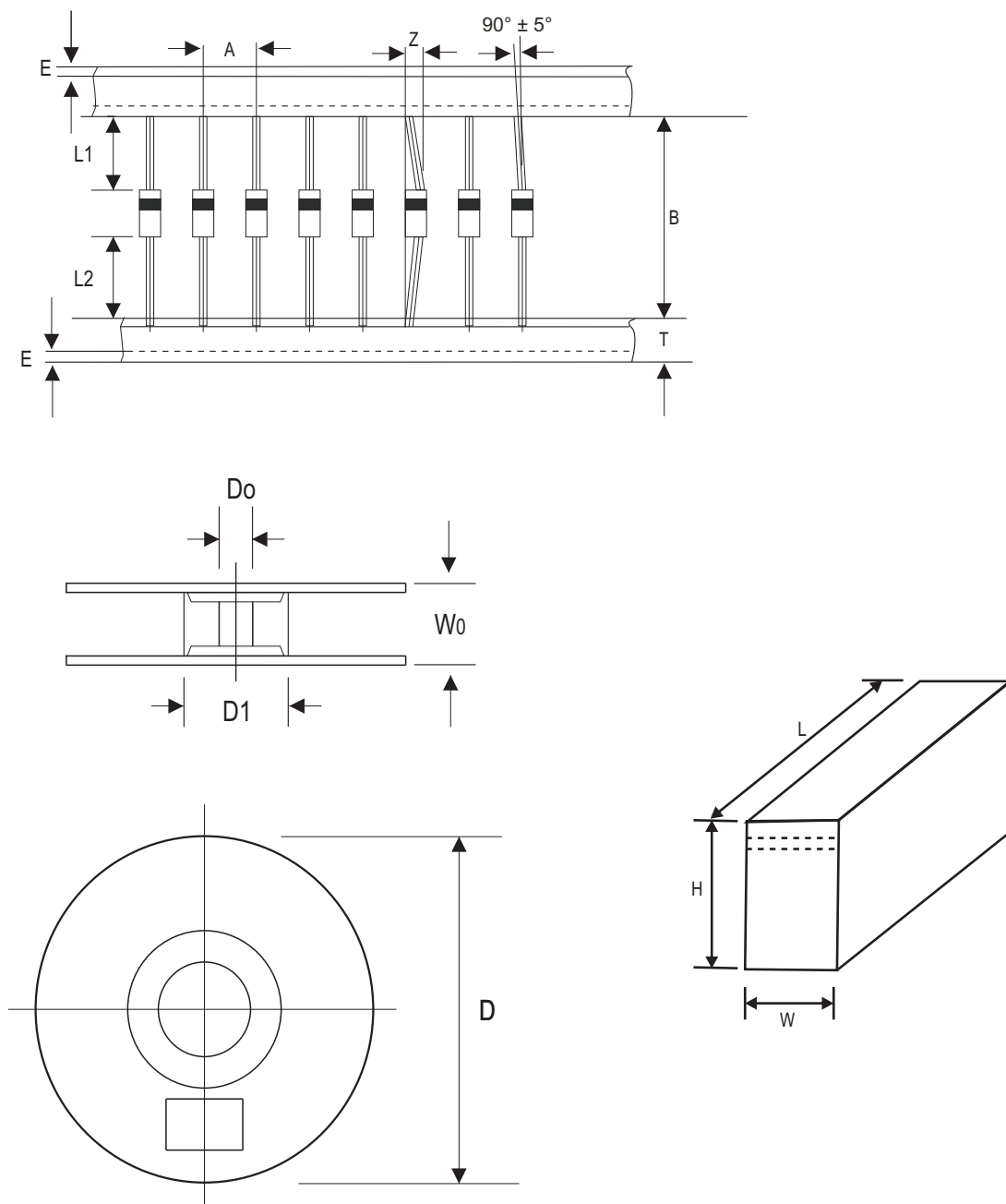


Fig.4 - Typical Forward Characteristics



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	1.20 (max)	6.00 ± 0.40	0.80 (max)	1.00 (max)	1.00 (max)
	(inch)	0.394 ± 0.020	2.063 ± 0.059	0.047 (max)	0.236 ± 0.016	0.031 (max)	0.039 (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	78.00 ± 5.00	95.00 ± 5.00
	(inch)	3.374 ± 0.012	0.654 ± 0.016	12.992	3.110 ± 0.039	10.039 ± 0.197	3.071 ± 0.197	3.740 ± 0.197

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)	CARTON (pcs)
R-6	500	5,000

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

Case Type	BULK PACK	
	BOX (pcs)	CARTON (pcs)
R-6	250	6,000