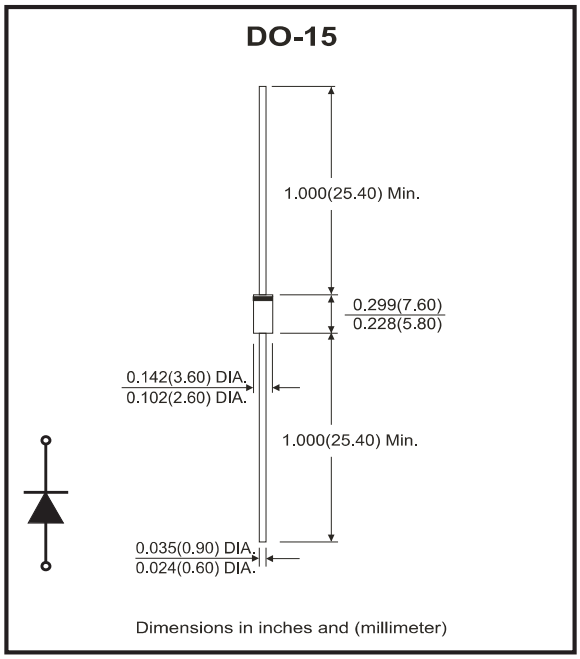
FR201G THRU FR207G

Fast Recovery Glass Passivated Rectifiers

Reverse Voltage: 50 to 1000 Volts
Forward Current: 2.0 Ampere
RoHS Device
Halogen Free

Features

- Glass passivated chip.
- Low forward voltage.
- High reliability.
- High surge current capability.
- High current capability.



Mechanical data

- Case: JEDEC DO-15 molded plastic.
- Epoxy: UL94V-0 rate flame retardant.
- Polarity: Color band denotes cathode end.
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any

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 by 20%

Parameter	Symbols	FR201G	FR202G	FR203G	FR204G	FR205G	FR206G	FR207G	Units
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	$I_{F(AV)}$	2.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	70							A
Max. forward voltage at 2.0A	V_F	1.3							V
Maximum DC reverse current T_a = 25°C at rated DC blocking voltage T_a =100°C	I_R	5 50							μA
Typical junction capacitance (Note 2)	C_j	40							pF
Maximum reverse recovery time (Note 1)	t_{rr}	150				250	500		ns
Typical thermal resistance (Note 3)	$R_{\theta JA}$	40							°C/W
Operating and storage temperature range	T_j, T_{stg}	-65 ~ +150							°C

Notes: 1. Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A(RGI circuit)

Rating and Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

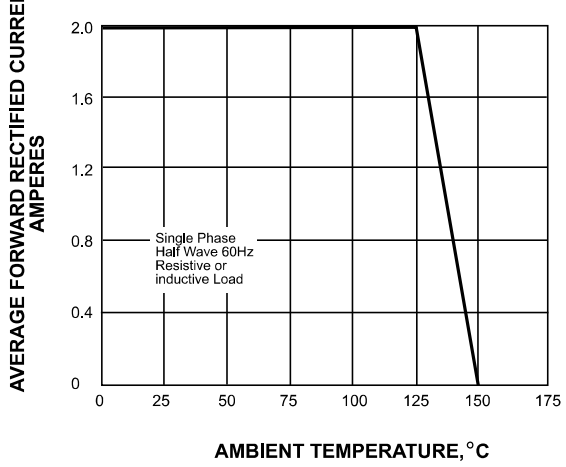


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

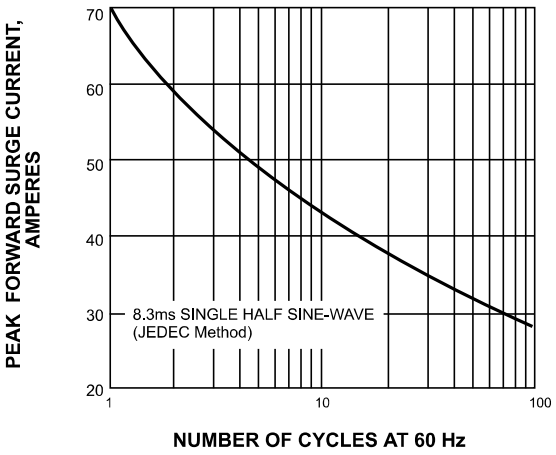


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

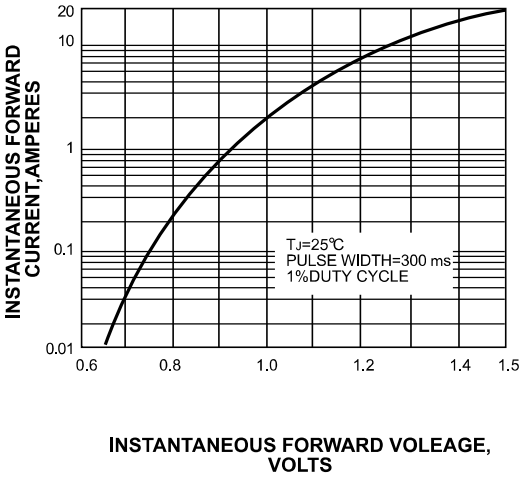


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

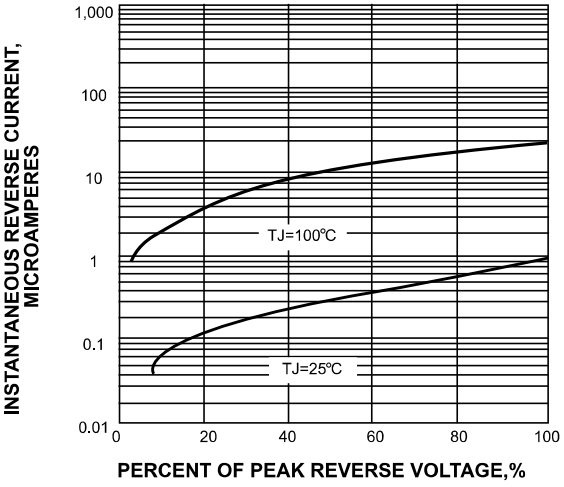


FIG. 5-TYPICAL JUNCTION CAPACITANCE

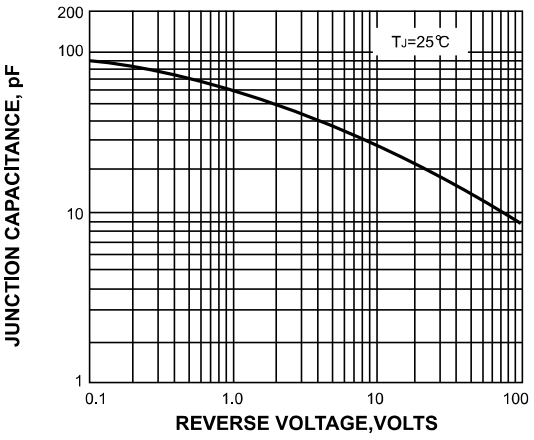
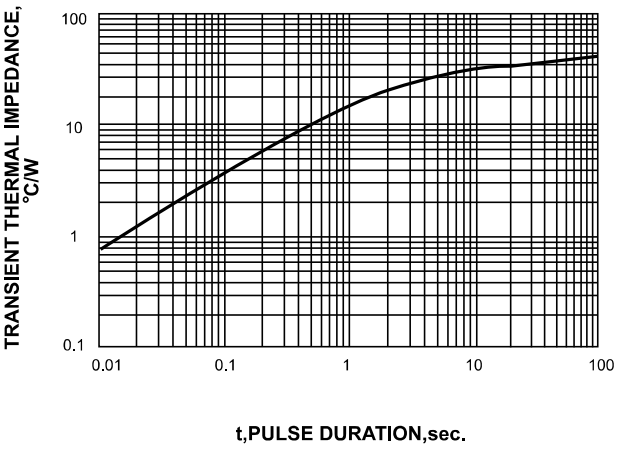


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Marking Code

Part Number	Marking code	Packaging
FR201G	FR201G	AMMO
FR202G	FR202G	AMMO
FR203G	FR203G	AMMO
FR204G	FR204G	AMMO
FR205G	FR205G	AMMO
FR206G	FR206G	AMMO
FR207G	FR207G	AMMO
FR201GT	FR201G	REEL
FR202GT	FR202G	REEL
FR203GT	FR203G	REEL
FR204GT	FR204G	REEL
FR205GT	FR205G	REEL
FR206GT	FR206G	REEL
FR207GT	FR207G	REEL
FR201GB	FR201G	BULK
FR202GB	FR202G	BULK
FR203GB	FR203G	BULK
FR204GB	FR204G	BULK
FR205GB	FR205G	BULK
FR206GB	FR206G	BULK
FR207GB	FR207G	BULK

XXX = Product type marking code

Note:

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

Packaging	Code
AMMO PACK	NA
REEL PACK	T
BULK PACK	B

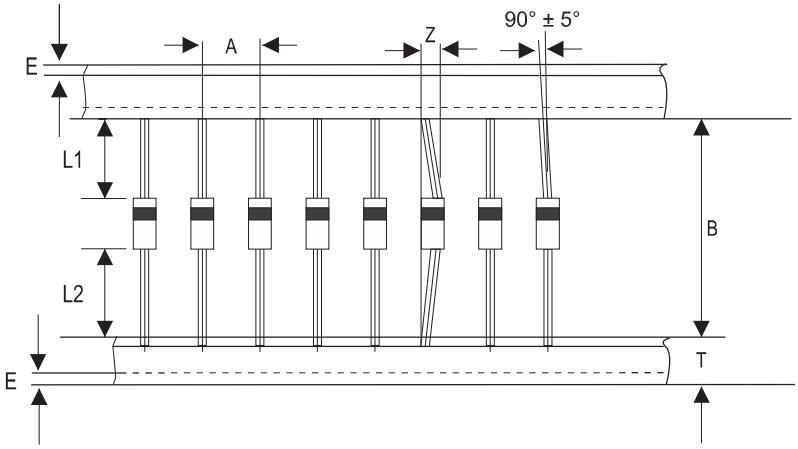
Standard Packaging

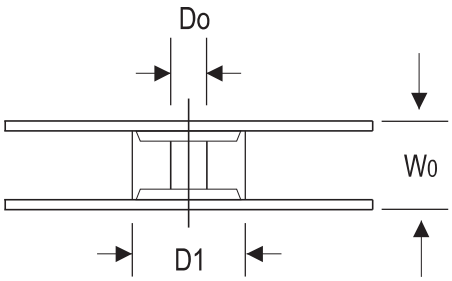
Case Type	AMMO PACK
	BOX (pcs)
DO-15	3,000

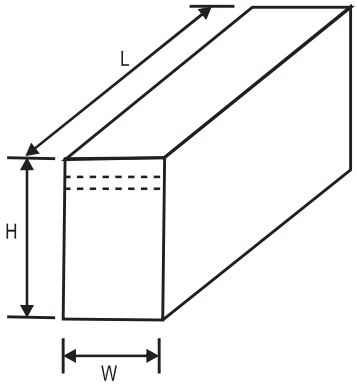
Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-15	4,000	13

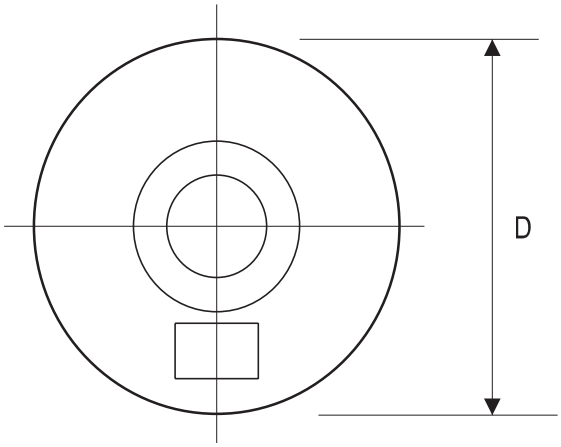
Case Type	BULK PACK
	BOX (pcs)
DO-15	500

Taping Specification For Axial Lead Diodes









	SYMBOL	A	B	Z	T	E	|L1-L2|
DO-15	(mm)	5.00 ± 0.50	52.40 + 1.50 − 0.40	1.20 (max)	6.00 ± 0.40	0.80 (max)	1.00 (max)
	(inch)	0.197 ± 0.020	2.063 + 0.059 − 0.016	0.047 (max)	0.236 ± 0.016	0.031 (max)	0.039 (max)

	SYMBOL	D1	D0	D	W0	L	W	H
DO-15	(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