

R-6 Plastic-Encapsulate Diodes

Fast Recovery Rectifier

Features

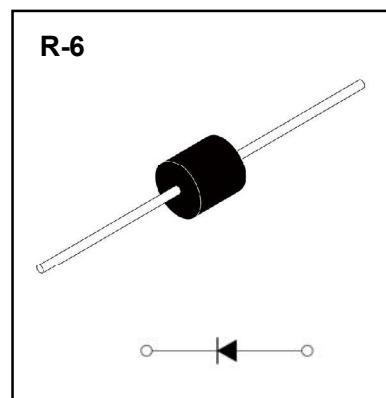
- I_o 6A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- FR60X
X: From 1 to 7



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	FR6						
				01	02	03	04	05	06	07
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	400	600	800	1000
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_a=50^\circ\text{C}$	6						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	200						
Junction Temperature	T_J	$^\circ\text{C}$		-55~+125						
Storage Temperature	T_{STG}	$^\circ\text{C}$		-55 ~ +150						

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition	FR6						
				01	02	03	04	05	06	07
Peak Forward Voltage	V_{FM}	V	$I_{FM}=6.0\text{A}$	1.3						
Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$						
	I_{RRM2}			$T_a=125^\circ\text{C}$						
Reverse Recovery time	t_r	ns	$I_F=0.5\text{A}$ $I_R=1\text{A}$ $I_{RR}=0.25\text{A}$	150			250	500		
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient	10						
Typical junction capacitance	C_j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	100						

Typical Characteristics

FIG.1 FORWARD CURRENT DERATING CURVE

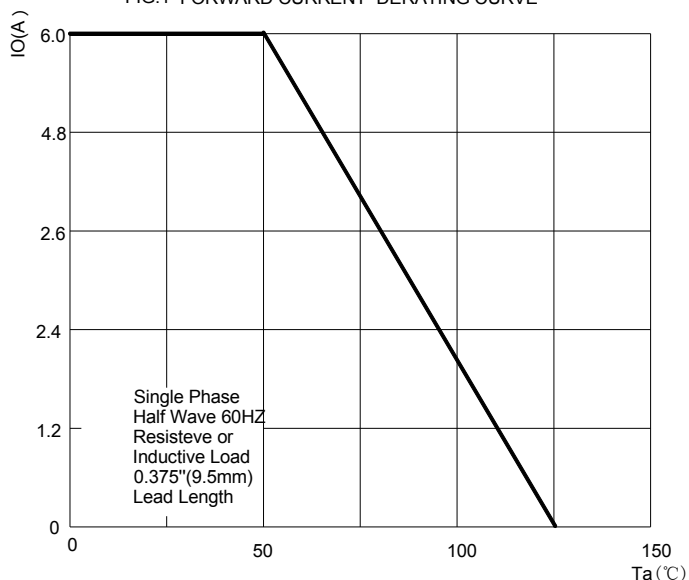


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

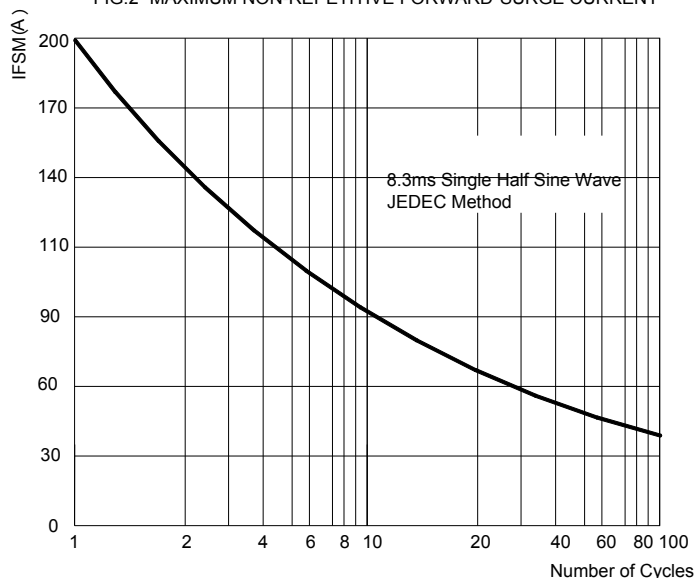


FIG.3 TYPICAL FORWARD CHARACTERISTICS

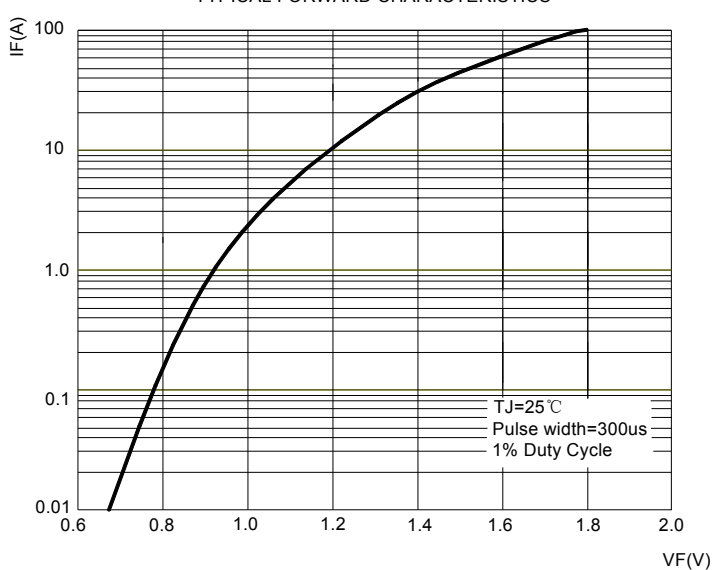


FIG.4 TYPICAL REVERSE CHARACTERISTICS

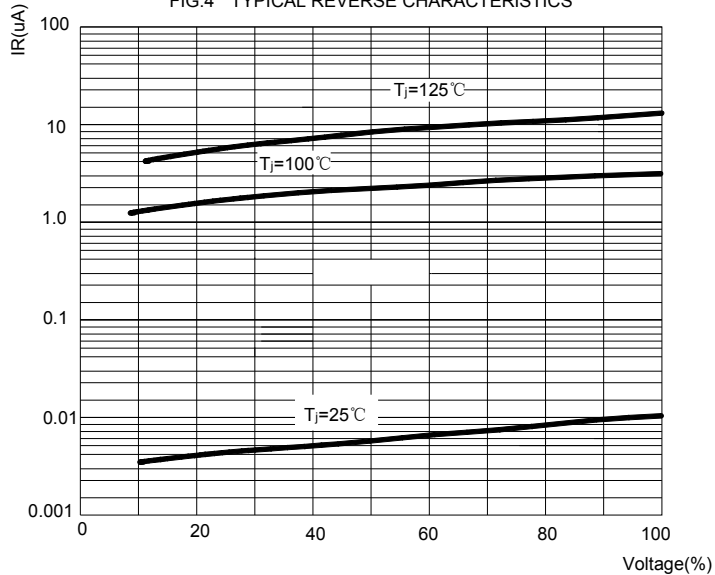
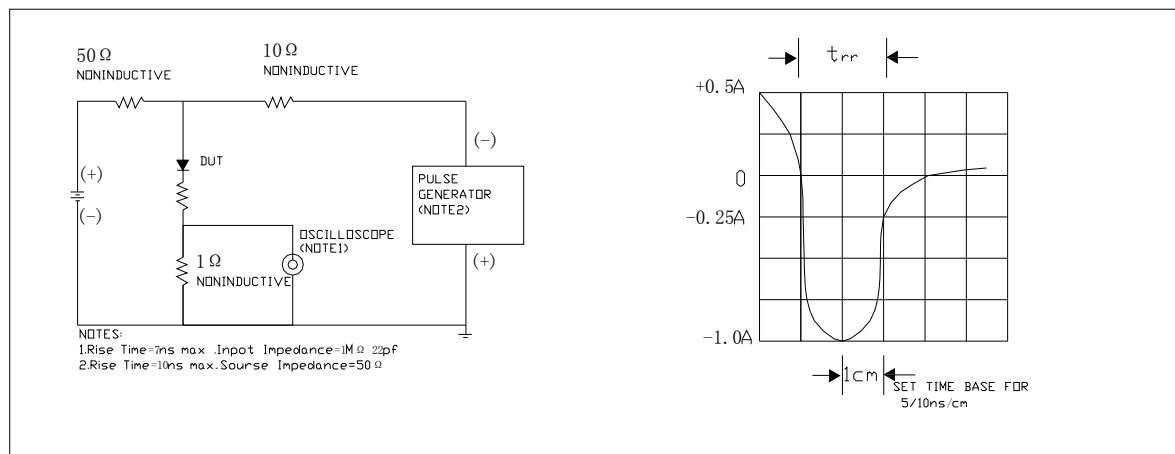
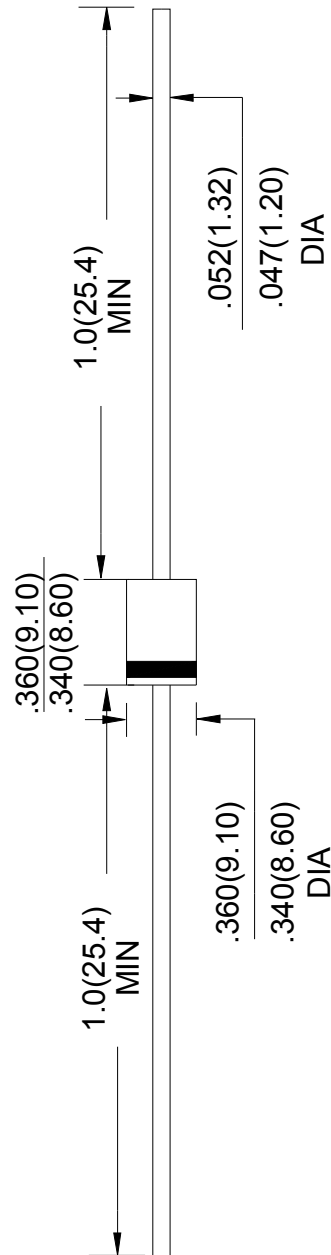


FIG.5 Diagram of circuit and Testing wave form of reverse recovery time



R-6 Package Outline Dimensions



Unit: in inches (millimeters)

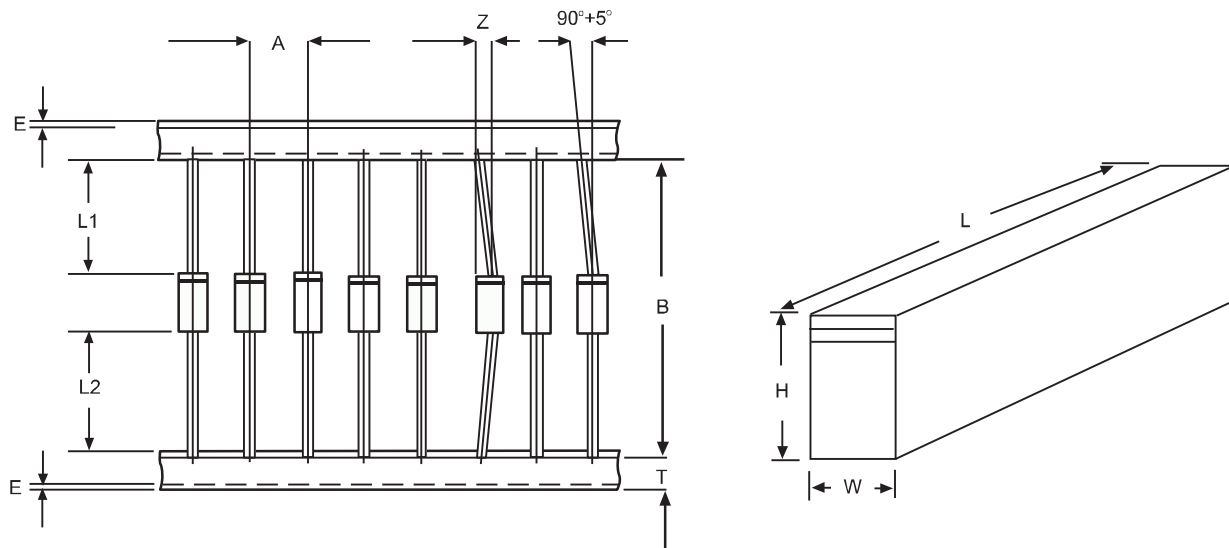
NOTICE

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Ammo Box Packaging Specifications For Axial Lead Rectifiers

Axial lead devices are packed in accordance with EIA standard RS-296-D and specifications given below

COMPONENT OUTLINE	COMPONENT PITCH A	INNER TAPE PITCH B	CUMULATIVE PITCH TOLERANCE
	$\pm 0.5\text{mm}(.020'')$	$+0.5\text{mm}(.020'')$	
R-1	5.0mm	26.0mm	2.0mm/20pitch
R-1	5.0mm	52.4mm	2.0mm/10pitch
A-405	5.0mm	26.0mm	2.0mm/20pitch
A-405	5.0mm	52.4mm	2.0mm/10pitch
DO-34/DO-35	5.0mm	26.0mm	2.0mm/20pitch
DO-34/DO-35	5.0mm	52.4mm	2.0mm/10pitch
DO-41	5.0mm	26.0mm	2.0mm/20pitch
DO-41	5.0mm	52.4mm	2.0mm/10pitch
DO-15	5.0mm	52.4mm	2.0mm/10pitch
DO-27	10.0mm	52.4mm	2.0mm/10pitch
R-6	10.0mm	52.4mm	2.0mm/10pitch



ITEM	SYMBOL	SPECIFICATIONS(mm)	SPECIFICATIONS(inch)
Component alignment	Z	1.2max	0.048max
Tape width	T	6.0 ± 0.4	0.236 ± 0.016
Exposed adhesive	E	0.8max	0.032max
Body eccentricity	$ L1-L2 $	1.0max	0.040max
Box length	L	255.0 ± 5.0	10.04 ± 0.197
Box width	W	78.0 ± 5.0	3.07 ± 0.197
Box height	H	150.0 ± 5.0	5.91 ± 0.197

NOTE: Each component lead shall be sandwiched between tapes for A minimum of 3.2mm(0.126'')