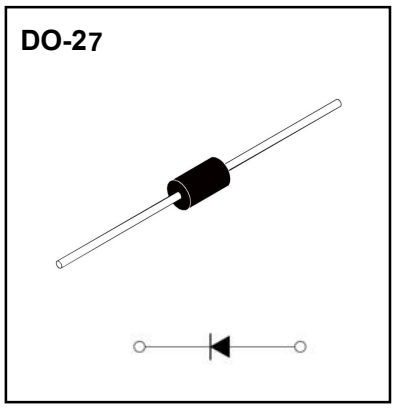
SZCJ Shenzhen Changji Semiconductor Co., LTD.

DO-27 Plastic-Encapsulate Diodes

FR301 THRU FR307 Fast Recovery Rectifier Diodes

Features

- $I_{F(AV)}$ 3.0A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode



Applications

- Rectifier

Marking

- FR30X

  X：From 1 To 7

Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	FR						
				301	302	303	304	305	306	307
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V		35	70	140	280	420	560	700
Maximum DC Blocking Voltage	V_{DC}	V		50	100	200	400	600	800	1000
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, TL=75℃	3						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, Ta=25℃	200						
Operation Junction and Storage Temperature Range	T_J,T_{STG}	℃		-55 ~ +150						

Electrical Characteristics (T=25℃ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		FR						
					301	302	303	304	305	306	307
Maximum Peak Forward Voltage	V_{FM}	V	I_{FM}=3.0A		1.3						
Maximum Peak Reverse Current	I_{RRM2}	μA	V_{RM}=V_{RRM}	T_J=25℃	5						
	I_{RRM1}			T_J=125℃	50						
Reverse Recovery time	t_{rr}	ns	I_F=0.5A,I_R=1.0A,I_{rr} =0.25A		150				250	500	
Typical junction capacitance	C_J	pF	Measured at 1MHz and applied reverse voltage of 4.0V D.C.		60						
Typical Thermal Resistance	$R_{\theta J-A}$	℃/W	Between junction and ambient		40						
	$R_{\theta J-L}$		Between junction and lead		15						

Notes:

Thermal resistance from junction to ambient at 0.375”(9.5mm)lead length,P.C.B. mounted

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

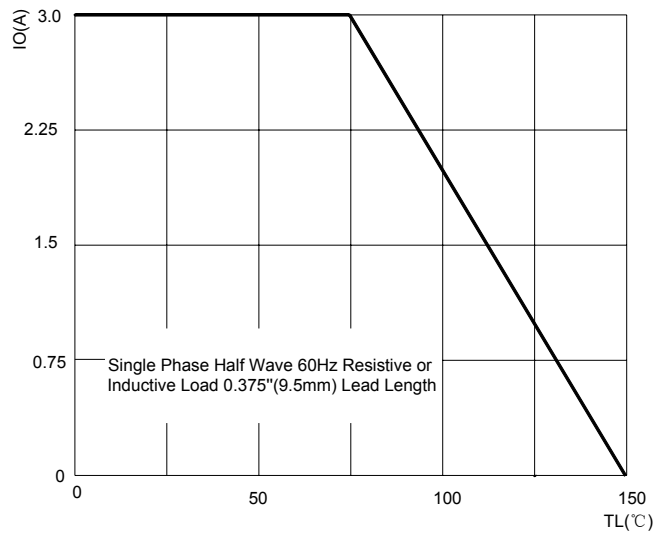


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

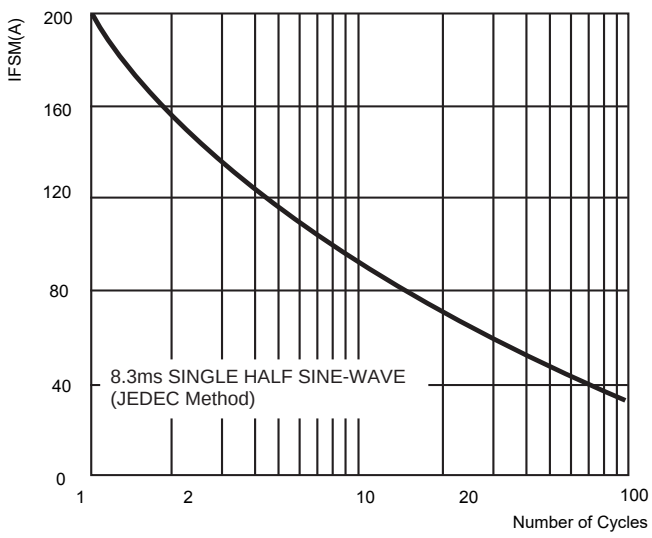


FIG.3: TYPICAL FORWARD CHARACTERISTICS

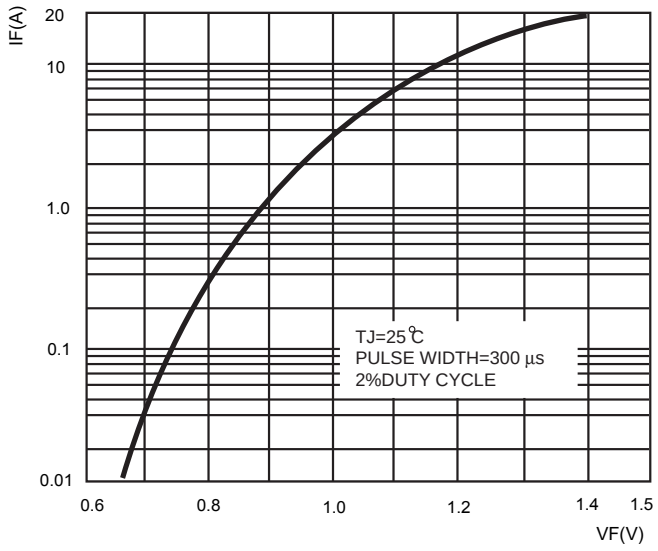


FIG.4：TYPICAL REVERSE CHARACTERISTICS

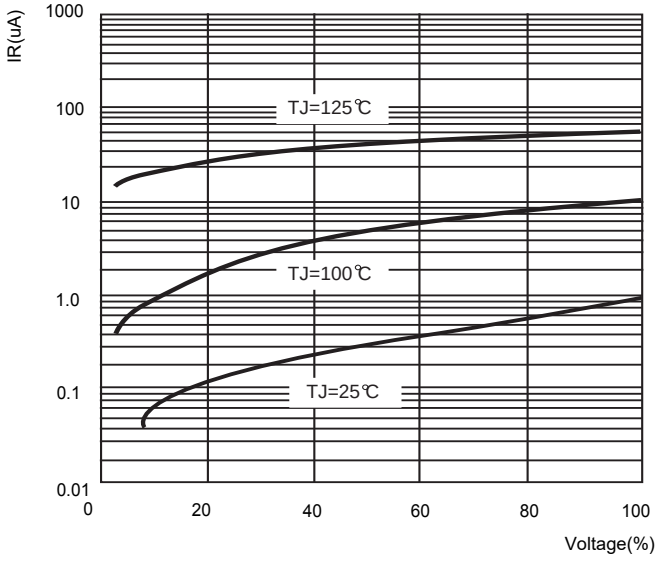
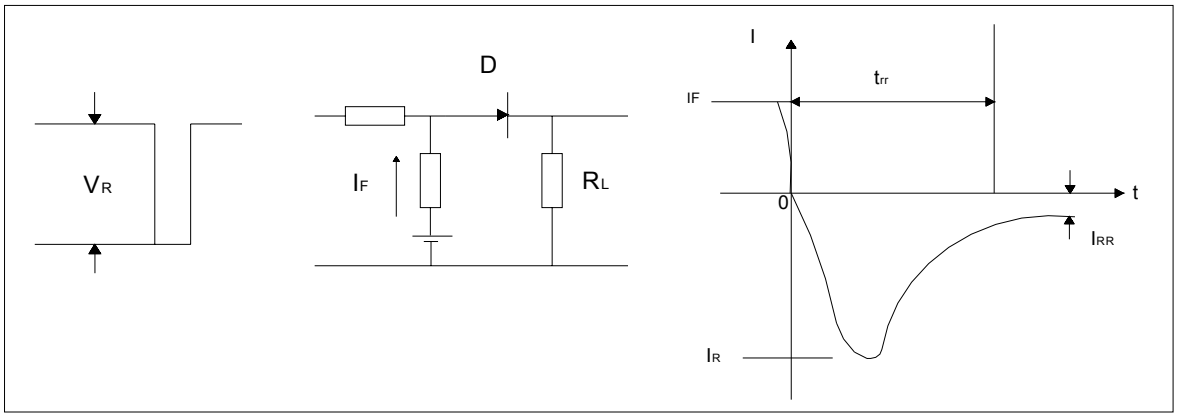
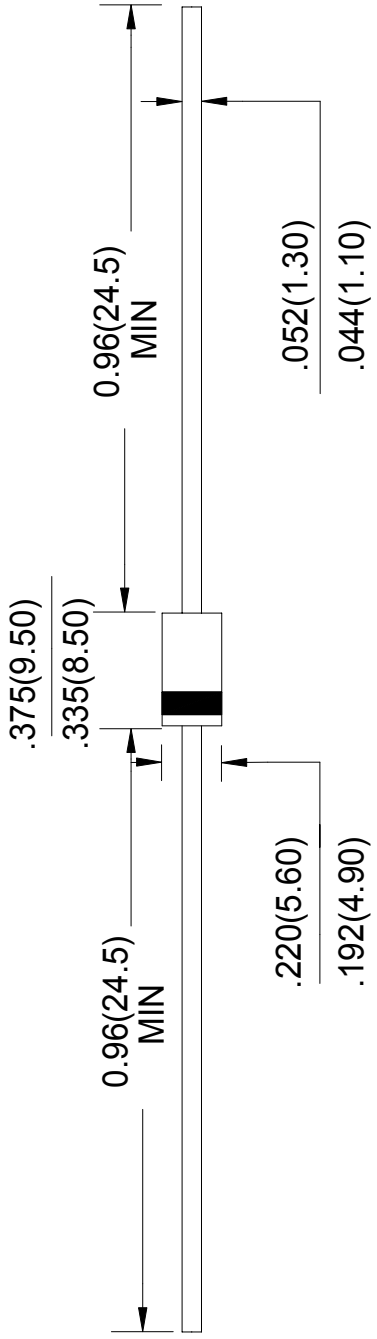


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



DO- 27 Package Outline Dimensions



Unit: in inches (millimeters)

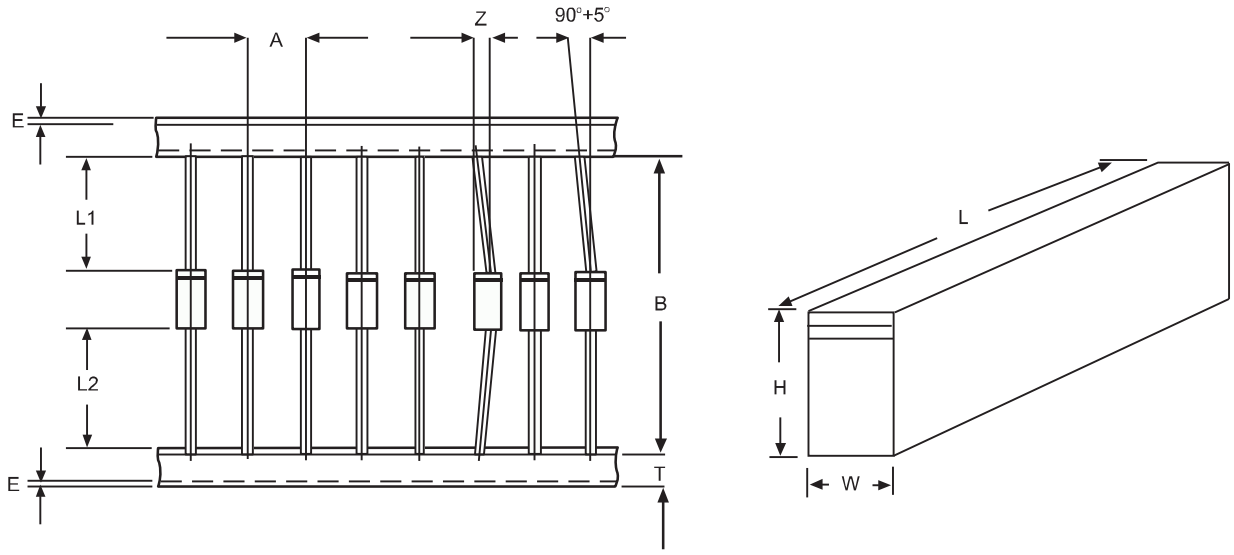
NOTICE

SZCJ reserves the right to make modifications,enhanc nts,improvements,corrections or other es without further notice to any product herein. SZCJ does not assume any liability arising out of the application or use of any product described .

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
	±0.5mm(.020``)	+0.5mm(.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``)