

DO-27 Plastic-Encapsulate Diodes

1N5400 THRU 1N5408 General Purpose Rectifier Diodes

Features

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

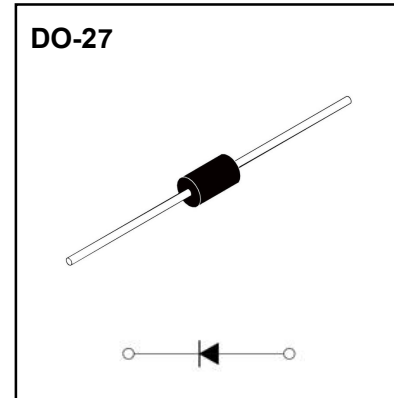
Applications

- Rectifier

Marking

- 1N54XX

XX: From 00 To 08



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	1N54								
				00	01	02	03	04	05	06	07	08
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	300	400	500	600	800	1000
Maximum RMS Voltage	V_{RMS}	V		35	70	140	210	280	350	420	560	700
Maximum DC Blocking Voltage	V_{DC}	V		50	100	200	300	400	500	600	800	1000
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_a=75^\circ\text{C}$	3								
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	150								
Junction Temperature	T_J	$^\circ\text{C}$		-55 ~ +150								
Storage Temperature	T_{STG}	$^\circ\text{C}$		-55 ~ +150								

Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition	Value	
Maximum Peak Forward Voltage	V_{FM}	V	$I_{FM}=3.0\text{A}$	1.1	
Maximum Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$	5
	I_{RRM2}			$T_a=125^\circ\text{C}$	100
Typical junction capacitance	C_J	pF	Measured at 1MHz and applied reverse voltage of 4.0V D.C.	30	
Typical Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient	20	
	$R_{\theta J-L}$		Between junction and Lead	10	

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

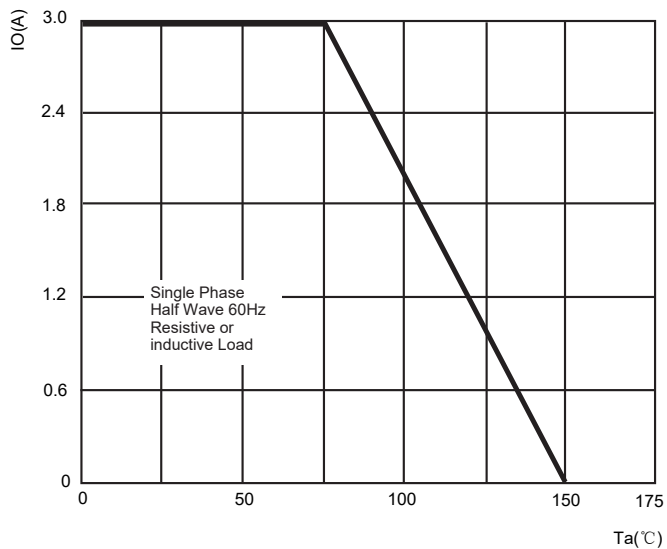


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

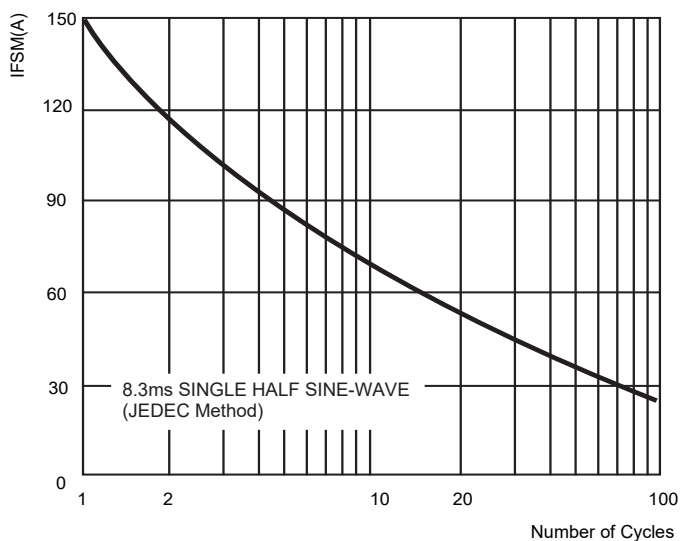


FIG.3: TYPICAL FORWARD CHARACTERISTICS

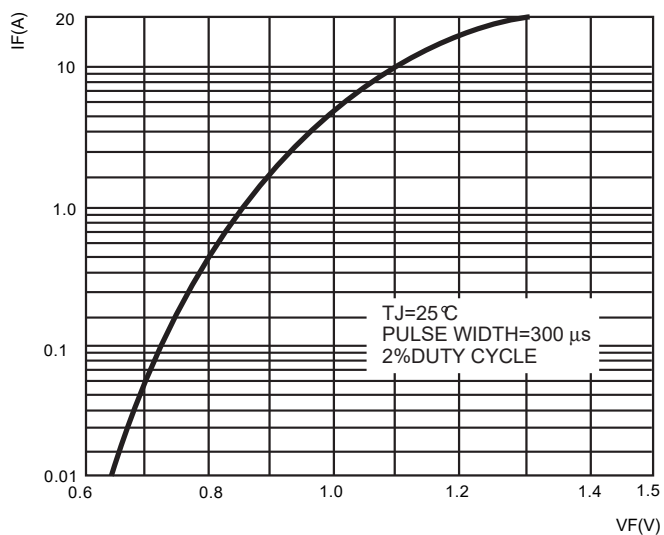
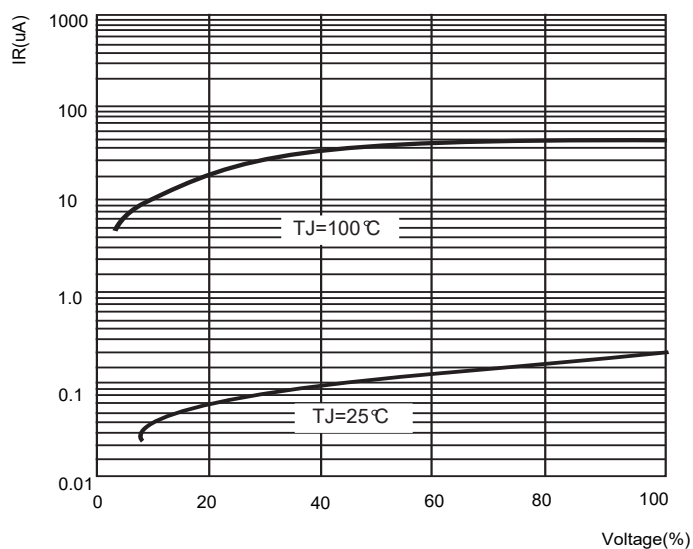
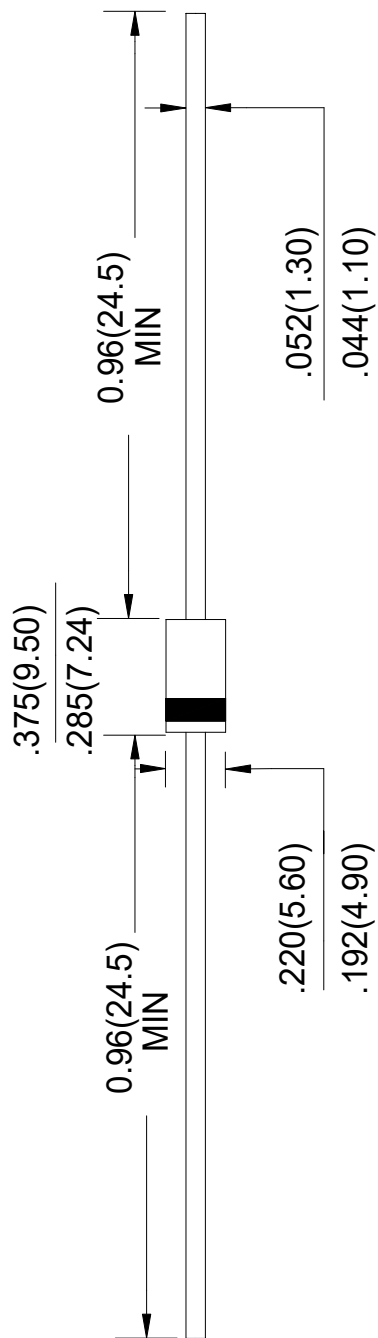


FIG.4: TYPICAL REVERSE CHARACTERISTICS



DO-27 Package Outline Dimensions



Unit: in inches (millimeters)

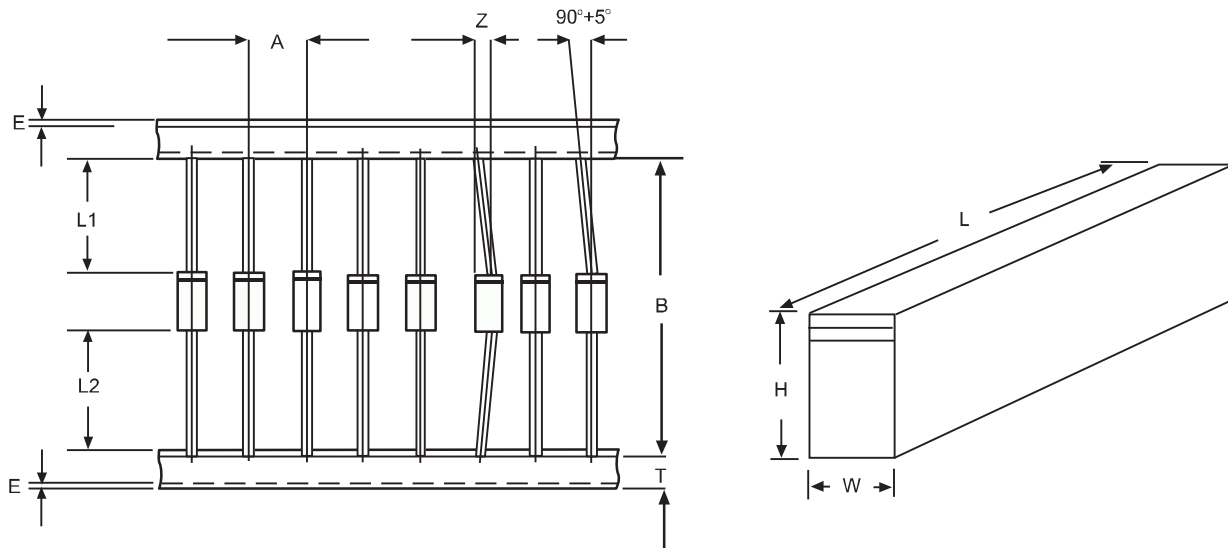
NOTICE

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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'')

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