

SMAJ Plastic-Encapsulate Diodes

Fast Recovery Rectifier

Features

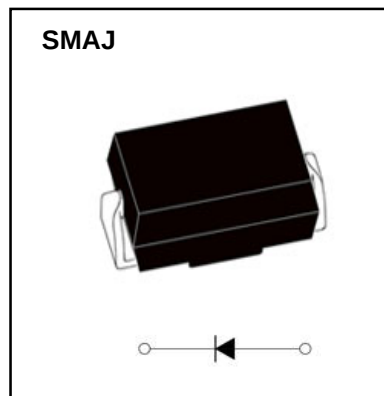
- I_o 0.5A
- V_{RRM} 8kV
- High surge current capability
- Polarity: Color band denotes cathode

Applications

- Rectifier

Marking

- HD8KL



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	HD8KL
Repetitive Peak Reverse Voltage	V_{RRM}	V		8000
Maximum RMS Voltage	V_{RMS}	V		5600
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_a=75^{\circ}\text{C}$	0.5
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}\text{C}$	15
Junction Temperature	T_J	$^{\circ}\text{C}$		-55~+150
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	HD8KL
Peak Forward Voltage	V_{FM}	V	$I_{FM}=1.0\text{A}$	10.0
Peak Reverse Current	I_{RRM1}	μA	$V_R=V_{RRM}$	5
	I_{RRM2}			50
Reverse Recovery time	t_{rr}	ns	$I_F=0.5\text{A}$ $I_R=1\text{A}$ $I_{RR}=0.25\text{A}$	100
Thermal Resistance(Typical)	$R_{\theta JA}$	$^{\circ}\text{C/W}$	Between junction and ambient	55
	$R_{\theta JL}$		Between junction and lead	25

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

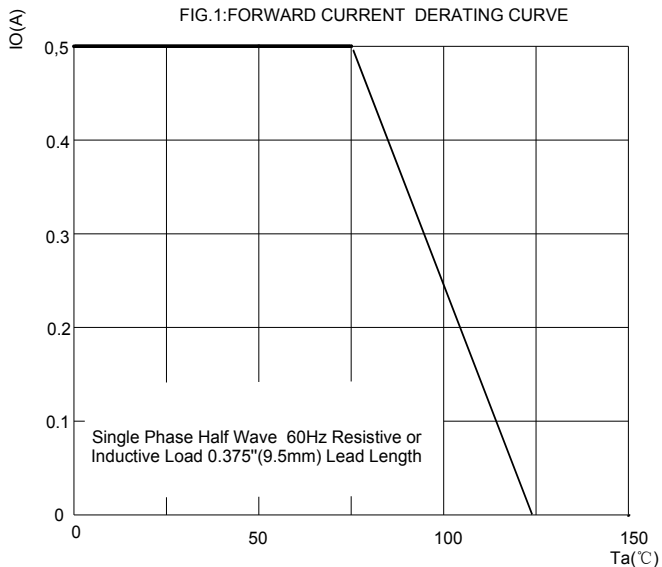


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

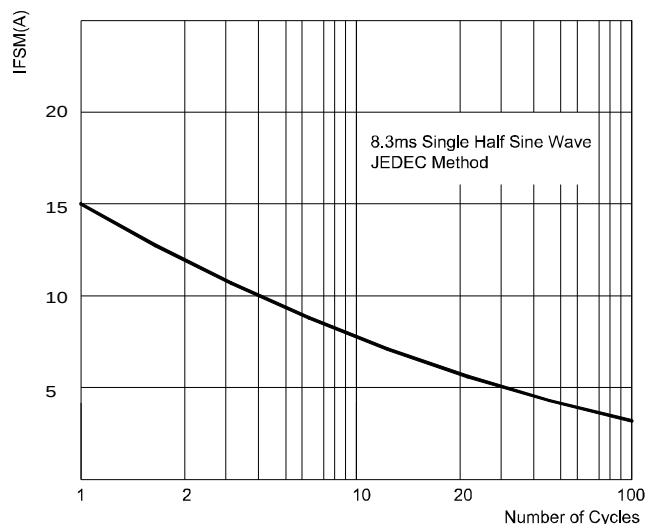


FIG.3: TYPICAL FORWARD CHARACTERISTICS

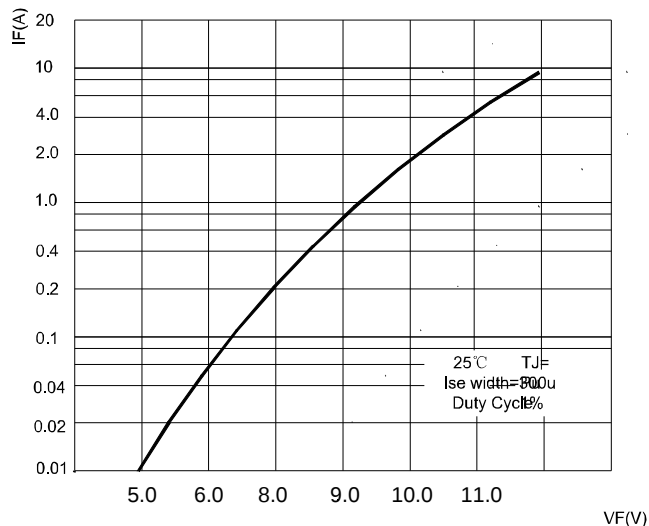


FIG.4: TYPICAL REVERSE CHARACTERISTICS

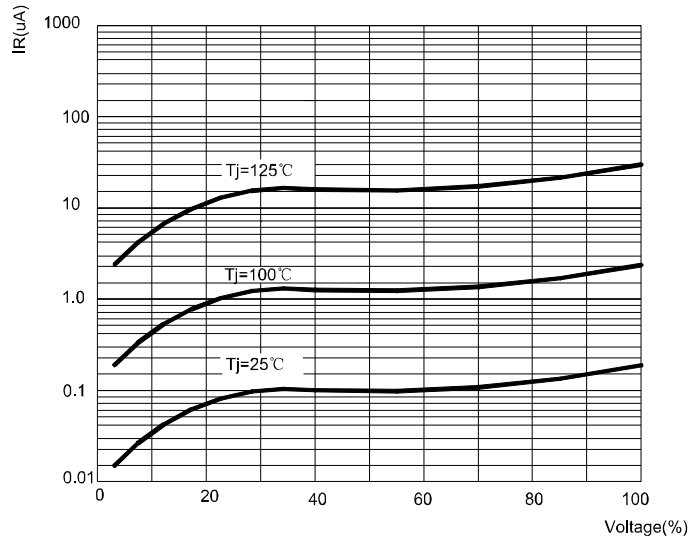
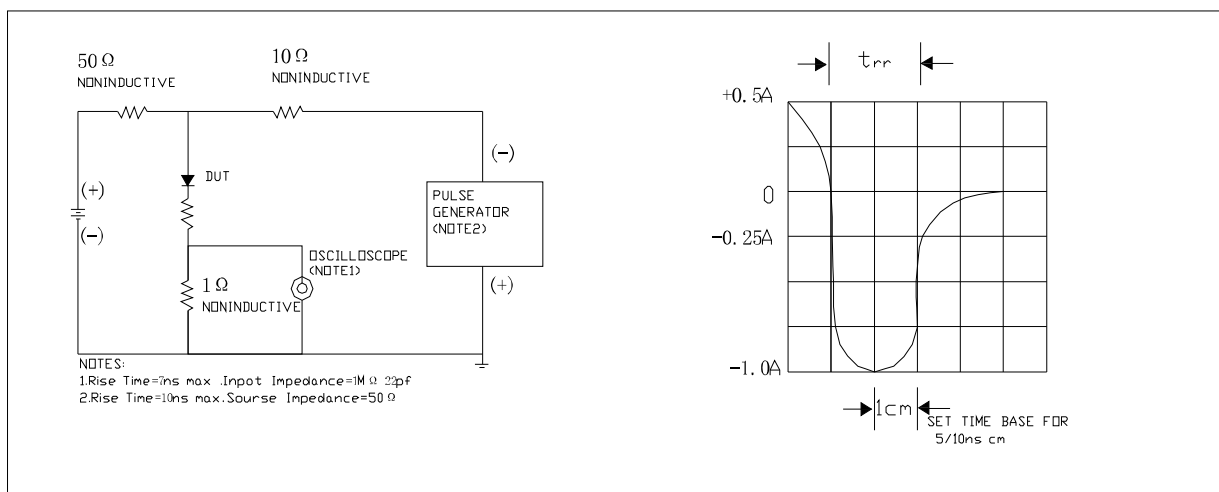
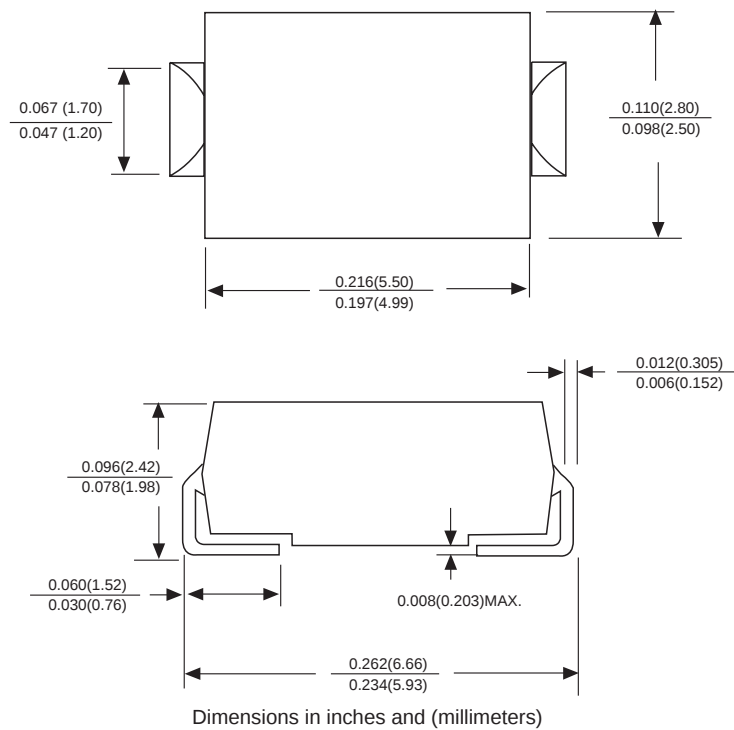


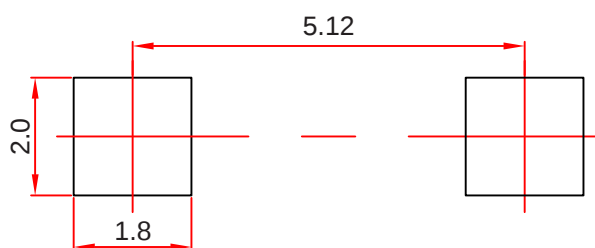
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



SMAJ Package Outline Dimensions



SMAJ Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSHD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSHD does not assume any liability arising out of the application or use of any product described herein.

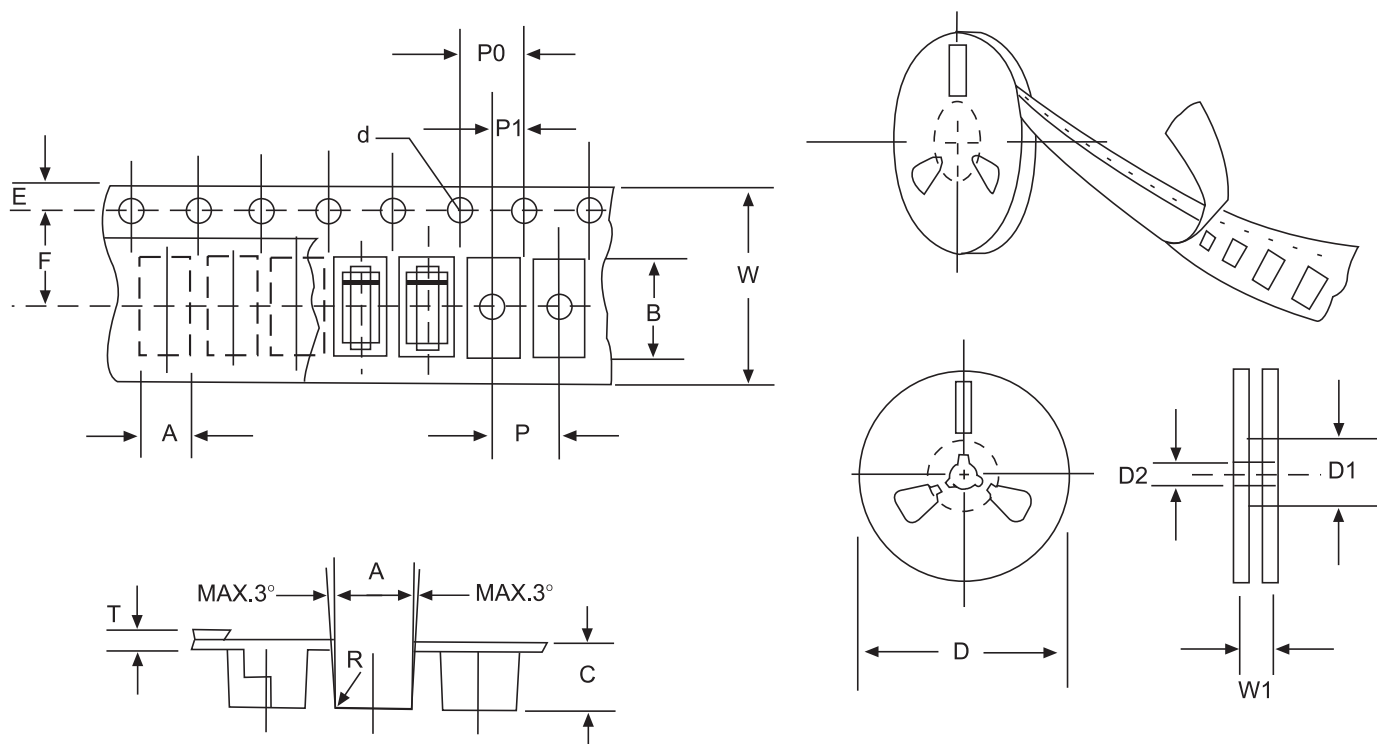


FIG:CONFIGURATION OF AXIAL TAPING

ITEM	SYMBOL	SMA mm(inch)
Carrier width	A	2.79±0.1(0.110±0.004)
Carrier length	B	6.33±0.1(0.249±0.004)
Carrier depth	C	2.36±0.1(0.093±0.004)
Sprocket hole	d	1.5±0.05(0.059±0.0002)
Reel outside diameter	D	330/178±2.0(13/7.0±0.79)
Reel inner diameter	D1	8.0±0.2(0.315±0.008)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Strocket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	6.0±0.05(0.236±0.002)
Punch hole pitch	P	4.0±0.1(0.157±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.28±0.02(0.011 ±0.0008)
Tape width	W	12.0±0.2(0.472±0.008)
Reel width	W1	16.8±2.0(0.661±0.079)

NOTE:Devices are packde in accordance with EIA standard RS-481-A and specification given above.