



Super Fast Recovery Rectifier

Features

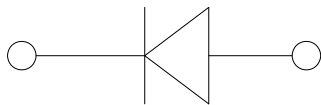
- Short reverse recovery time
- Low average current
- Low switching losses, high efficiency
- High forward surge capability
- Dissipates chip junction
- Operates up to 275 °C max. 7 s, per JESD 22-B106

Typical Applications

- High frequency rectification and freewheeling
- Applications in switching mode converters and inverters
- Power supplies for computer and telecommunication.

Maximum Ratings

- Package: R-1
- The compound meets UL 94 V-0 flammability rating, RoHS compliant, Halogen free
- Leads: Tin plated leads, solderable per JEDEC EIA-602 and JESD22-B102
- Color band denotes the cathode end



Maximum Ratings (Ta=25 °C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT
Maximum Repetitive Peak Reverse Voltage	VRRM	V
Maximum RMS Voltage	VRMS	V
Maximum DC blocking Voltage	VDC	V
Average Forward Current 60Hz sine wave, Resistance load, Ta=25 °C	IF(AV)	A
Forward Surge Current (Non-repetitive) 60Hz Half-sine wave, 1 cycle, Tj=25 °C	IFSM	A
Forward Surge Current (Non-repetitive) 1ms, square wave, 1 cycle, Tj=25 °C		
Current squared time @1ms to 8.3 ms Tj=25 °C Rating of per diode	I²t	A²s
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF
Storage Temperature	Tstg	
Junction Temperature	Tj	

	1S2G	1S3G	1S4G	1S5G	1S6G	1S7G	1S8G
Maximum Repetitive Peak Reverse Voltage	100	150	200	300	400	500	600
Maximum RMS Voltage	70	105	140	210	280	350	420
Maximum DC blocking Voltage	100	150	200	300	400	500	600
Average Forward Current	1.0						
Forward Surge Current (Non-repetitive)	30						
Forward Surge Current (Non-repetitive)	60						
Current squared time	3.735						
Typical junction capacitance	18		12		9		
Storage Temperature	-55 ~ +150						
Junction Temperature	-55 ~ +150						

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	1S1G	1S2G	1S3G	1S4G	1S5G	1S6G	1S7G	1S8G
Maximum instantaneous forward voltage drop per diode	VF	V	IF=1.0A	0.95				1.3		1.7	
Maximum DC reverse current at rated DC blocking voltage per diode	IR	µA	Tj=25 °C	5							
			Tj=125 °C	100							
Maximum reverse recovery time	tr	ns	IF=0.5A, IR=1.0A, Itr=0.25A	35							



1S1G THRU 1S8G

Thermal Characteristics $T_a=25$ Unless otherwise specified

PARAMETER	SYMBOL	UNIT	1S1G	1S2G	1S3G	1S4G	1S5G	1S6G	1S7G	1S8G
Typical Thermal Resistance	R J-A	/W	95							

Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
1S1G~1S8G	D1	Approximate 0.19	5000	5000	50000	Tape
1S1G~1S8G	C1	Approximate 0.19	1000	1000	50000	Bulk

Characteristics(Typical)

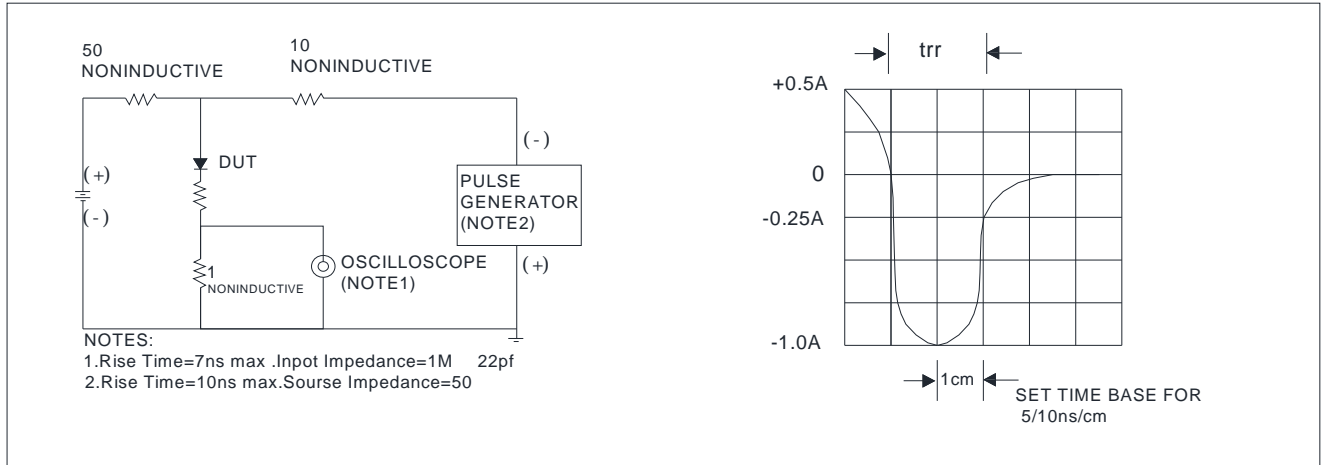
Instantaneous Forward Current (A)

Instantaneous Forward Voltage (V ° For Ø S 0

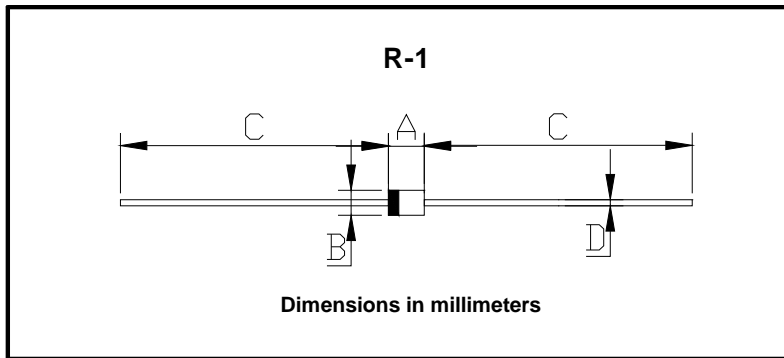


1S1G THRU 1S8G

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



Outline Dimensions



R-1		
Dim	Min	Max
A	3.00	3.30
B	2.00	2.70
C	25.4	/
D	0.53	0.64



1S1G THRU 1S8G

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