

SURFACE MOUNT FAST RECOVERY RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts
FORWARD CURRENT - 1.0 Ampere

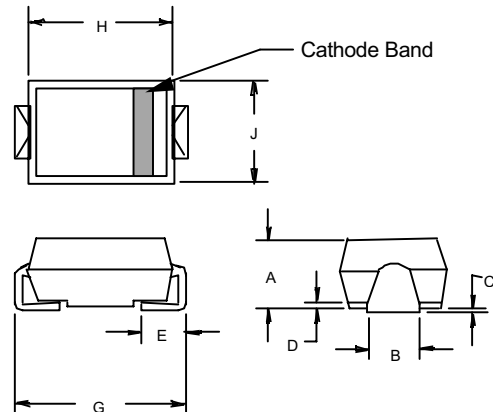
FEATURES

- Plastic passivated Junction
- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case : Molded plastic
- Polarity : Indicated by cathode band
- Weight : 0.002 ounces, 0.064 grams

SMAE



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.081	.089	2.05	2.25	
B	.059	.075	1.50	1.90	
C	.002	.010	0.05	0.25	
D	--	.008	--	.20	
E	.030	.052	0.76	1.32	
G	.189	.209	4.80	5.30	
H	.159	.167	4.05	4.25	
J	.094	.102	2.40	2.60	

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	FS1A	FS1B	FS1D	FS1G	FS1J	FS1K	FS1M	UNIT	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current @TL =90°C	I(AV)	1.0								A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load (JEDEC METHOD)	IFSM	30								A
Maximum forward Voltage at 1.0A DC	VF	1.3								V
Maximum DC Reverse Current @TJ =25°C at Rated DC Blocking Voltage @TJ =125°C	IR	5.0 100								uA
Typical Junction Capacitance (Note1)	CJ	10								pF
Typical Thermal Resistance (Note 2)	RθJL	30								°C/W
Maximum Reverse Recovery Time (Note 3)	T _{RR}	150				250	500		ns	
Operating Temperature Range	TJ	-55 to +150								°C
Storage Temperature Range	T _{STG}	-55 to +150								°C

NOTES : 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Thermal Resistance Junction to Lead.
3. Measured with :IF=0.5A, IR=1.0A, IRR=0.25A

RATNG AND CHARACTERISTIC CURVES

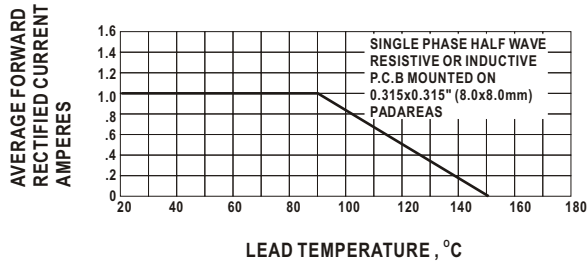


FIG. 1- FORWARD CURRENT DERATING CURVE

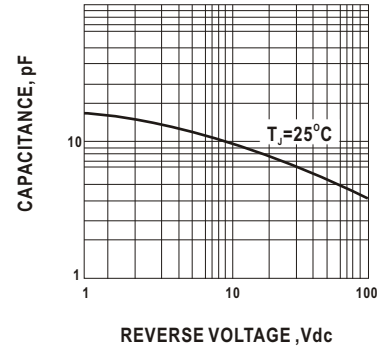


FIG. 2- TYPICAL JUNCTION CAPACITANCE

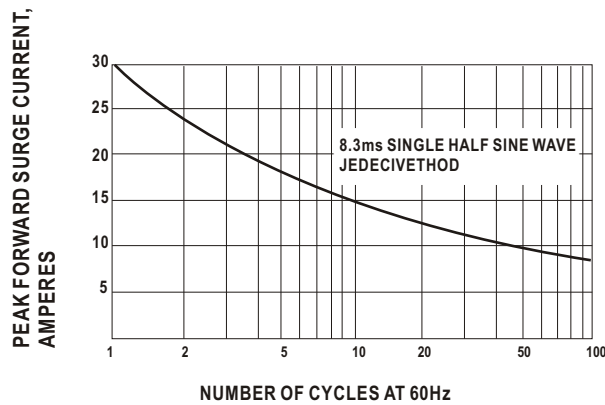


FIG. 3- PEAK FORWARD SURGE CURRENT

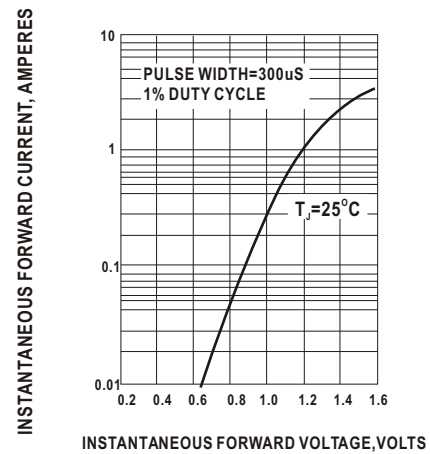
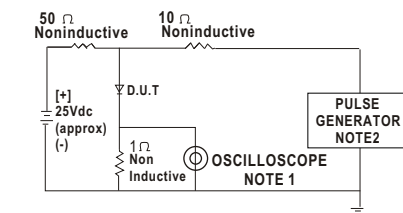


FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



NOTE:1. Rise TIME=7ns max
Input Impedance = 1 megohm 22 pF
2. Rise Time = 10ns max
Source Impedance = 50Ohms

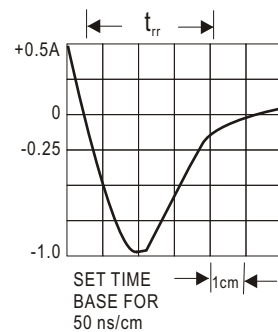


Fig. 5 - REVERSE FRCOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM