

Surface Mount Ultra Fast Recovery Rectifiers

(Pb) Lead(Pb)-Free

Features:

- *For Surface Mount Application
- *Glass Passivated Chip
- *Low Reverse Leakage Current
- *Low Forward Voltage Drop And High Current Capability
- *Plastic Material Has UL Flammability Classification 94V-0

Mechanical Data:

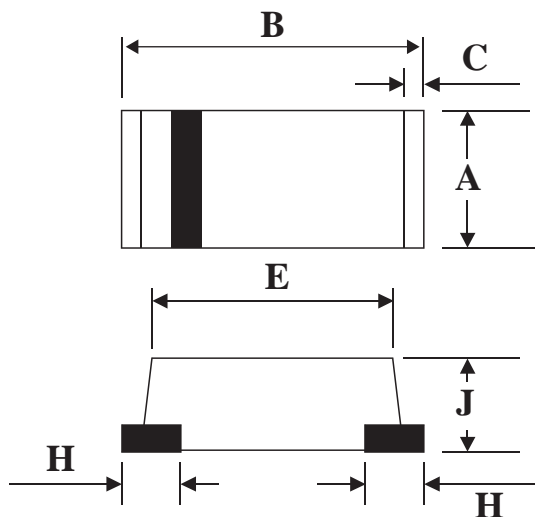
- * Case: Molded Plastic, MINI-SMA(Similar to SOD-123F)
- * Terminals: Solder Plated, Solderable per ML-STD-750 Method 2026
- * Polarity: Indicated by Cathode Band
- * Weight: 0.040 grams

**REVERSE VOLTAGE
50 TO 1000 VOLTS
FORWARD CURRENT
0.5 AMPERE**



MINI-SMA Outline Dimension

unit:mm



MINI-SMA		
Dim	Min	Max
A	1.40	1.80
B	3.70	4.10
C	-	0.30(TYP)
E	2.80	3.20
H	-	0.90(TYP)
J	1.40	1.60

Maximum Ratings and Electrical Characteristics

Rating 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	US 05AM	US 05BM	US 05DM	US 05GM	US 05JM	US 05KM	US 05MM	Unit	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current @T _A =50°C	I _{F(AV)}	0.5							A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	30							A	
Maximum Instantaneous At 0.5A DC	V _F	1.0		1.3		1.7		V		
Maximum DC Reverse Current @T _A =25°C At Rated DC Blocking Voltage @T _A =100°C	I _R	5.0				150				uA
Maximum Reverse Recovery Time	T _{RR}	50				75				ns
Typical Junction Capacitance (Note 1)	C _J	20(TYP)							PF	
Typical Thermal Resistance (Note 2)	R _{θJA}	42(TYP)							°C/W	
Operating Temperature Range	T _J	-55 to+150							°C	
Storage Temperature Range	T _{STG}	-55 to+150							°C	

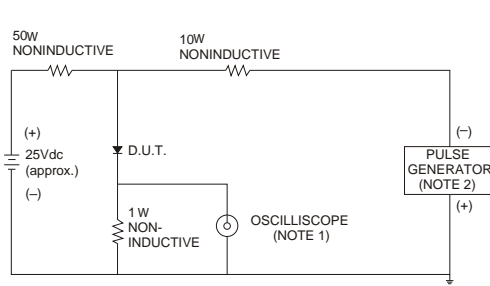
NOTES: 1.Measured at 1.0MHz applied reverse voltage of 4.0V DC.

2.Thermal Resistance Junction to Ambient.

Device Marking

Item	Marking	Item	Marking
US05AM	U1	US05JM	U5
US05BM	U2	US05KM	U6
US05DM	U3	US05MM	U7
US05GM	U4		

RATING AND CHARACTERISTIC CURVES



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

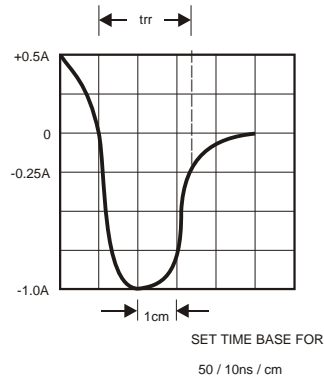


FIG.1- Test Circuit Diagram and Reverse Recovery Time Characteristics

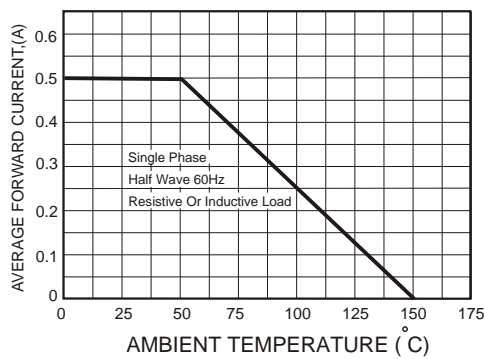


FIG.2-Typical Forward Current Derating Curve

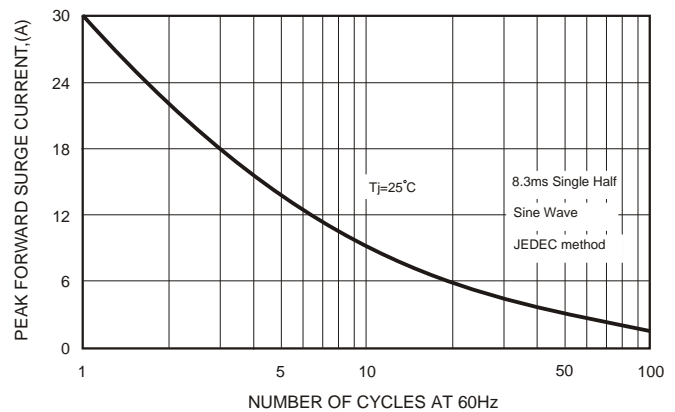


FIG.3-Maximum Non-repetitive Forward Surge Current

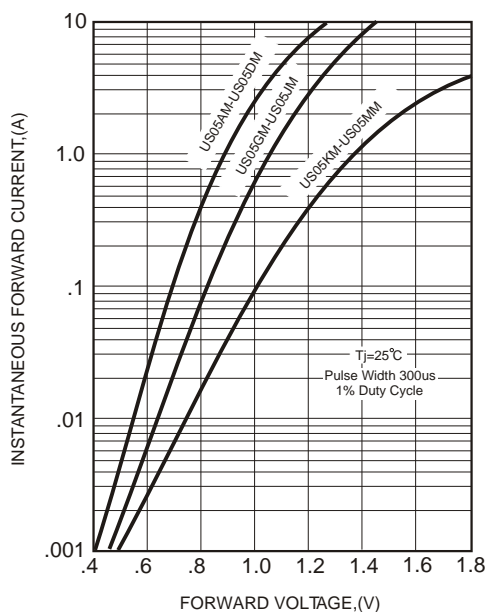


FIG.4-Typical Forward Characteristics

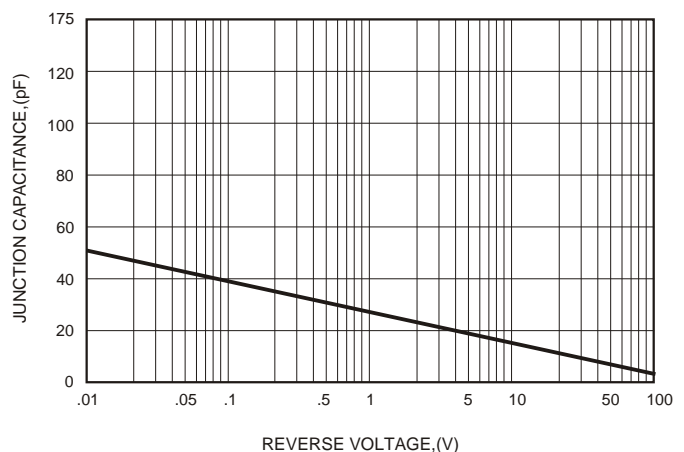


FIG.5-Typical Junction Capacitance