150mA, 80V Switching Diode

FEATURES

- Fast switching device (trr < 4ns)
- High surge current capability
- Hermetically sealed glass
- RoHS Compliant

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- On-board DC/DC converter

MECHANICAL DATA

- Case: DO-34
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 92.00mg (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	150	mA
V_{RRM}	80	V
I_{FSM}	2	A
V_F at I_F = 100mA	1.2	V
$T_{J\,MAX}$	175	°C
Package	DO-34	
Configuration	Single die	

Pb-Free RoHS COMPLIANT

DO-34

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)				
PARAMETER		**SYMBOL**	**1SS133M**	**UNIT**
Marking code on the device			133	
Power dissipation		P_D	300	W
Repetitive peak reverse voltage		V_{RRM}	80	V
Forward current		I_F	150	mA
Non-repetitive peak forward surge current	t = 1μs	I_{FSM}	2	A
Repetitive peak forward current		I_{FRM}	450	mA
Junction temperature range		T_J	-65 to +175	°C
Storage temperature range		T_{STG}	-65 to +200	°C

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	MIN	MAX	UNIT
Reverse breakdown voltage	I_R = 500nA	V_{BR}	80	-	V
Forward voltage[1]	I_F = 100mA, T_J = 25°C	V_F	-	1.2	V
Reverse current @ rated V_R[2]	V_R = 80V, T_J = 25°C	I_R	-	500	nA
Junction capacitance	1MHz, V_R = 0V	C_J	-	4	pF
Reverse recovery time	I_F = I_R = 10mA, R_L = 100Ω, I_{RR} = 1mA	t_{rr}	-	4	ns

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION

ORDERING CODE[1]	PACKAGE	PACKING
1SS133M R0	DO-34	10,000 / 14" Reel
1SS133M A0	DO-34	5,000 / Ammo Box
1SS133M R0G	DO-34	10,000 / 14" Reel
1SS133M A0G	DO-34	5,000 / Ammo Box

Notes:

1. Above ordering codes A0/A0G/R0/R0G refer to physically identical parts without any differences.

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

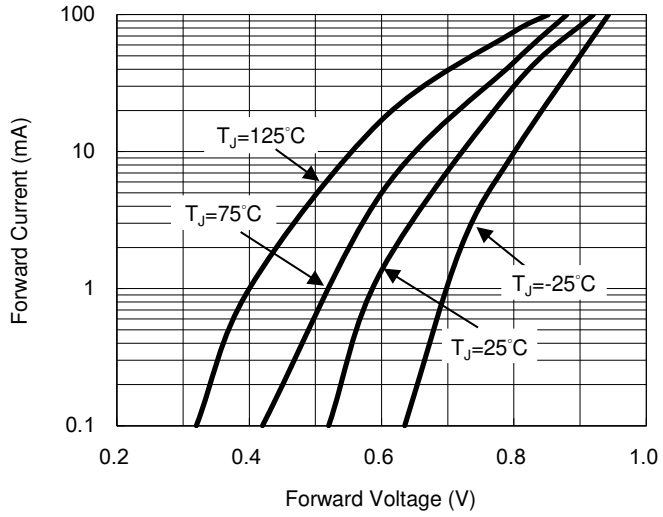


Fig.2 Reverse Current VS. Reverse Voltage

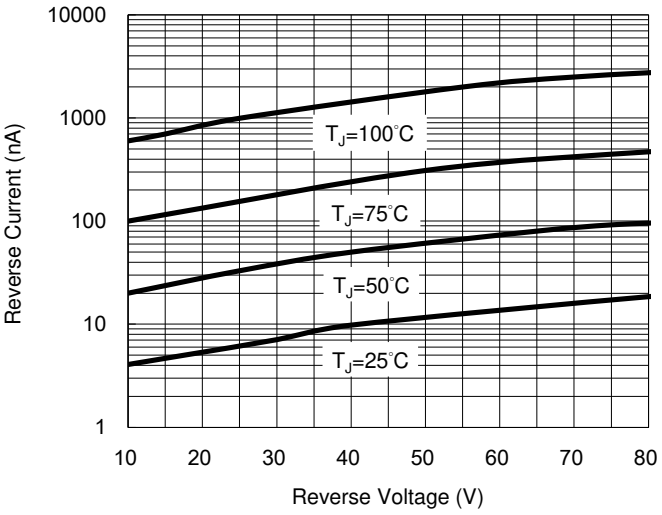


Fig.3 Typical Junction Capacitance

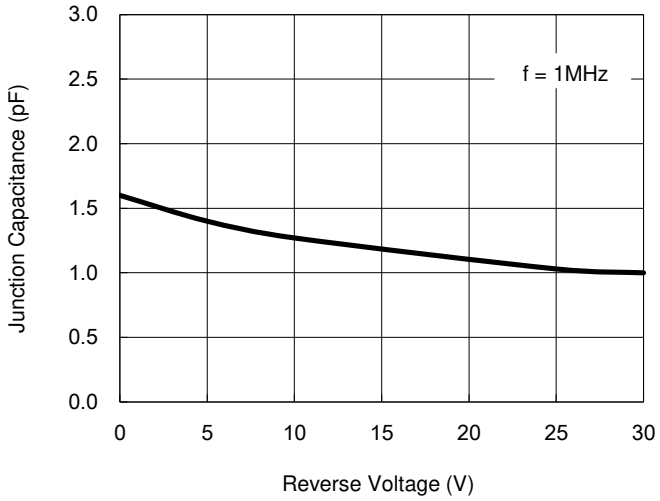
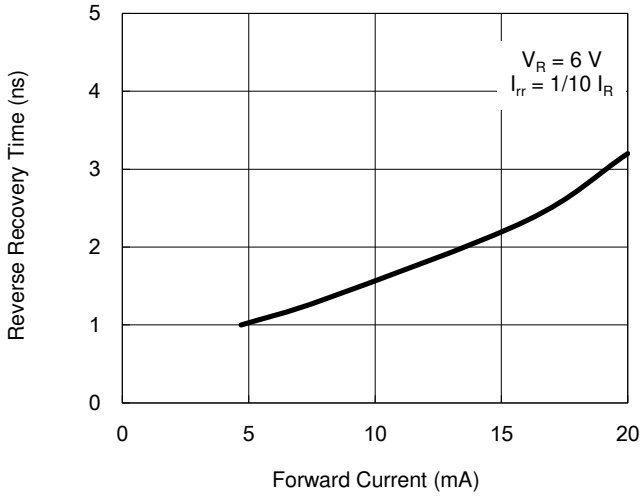


Fig.4 Reverse Recovery Time Characteristics



CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.5 Surge Current Characteristics

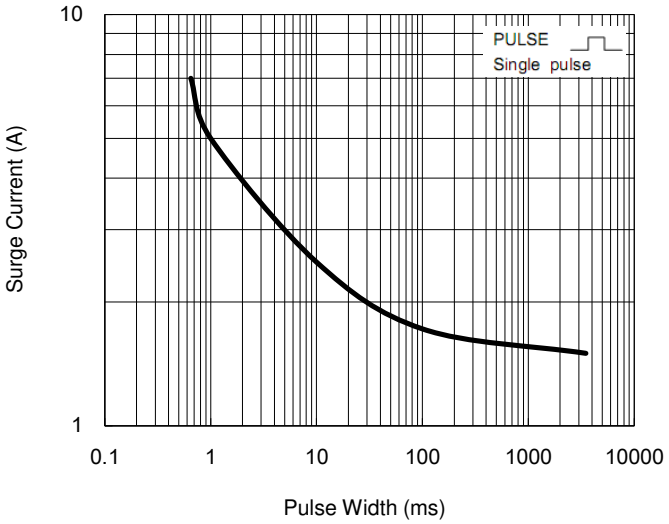
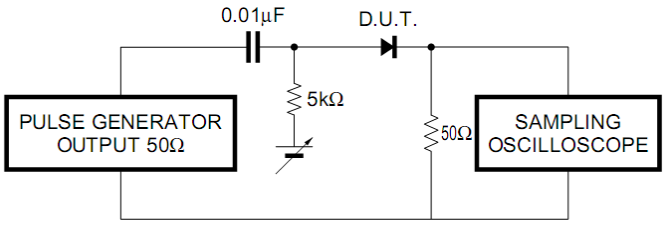
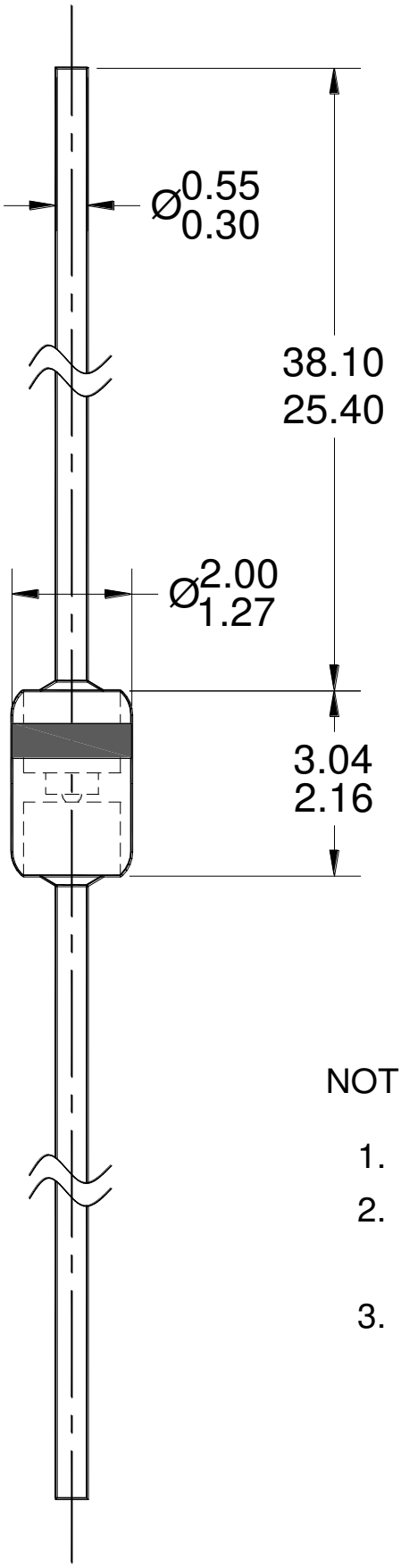


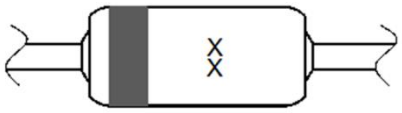
Fig.6 Reverse Recovery Time Measurement Circuit



PACKAGE OUTLINE DIMENSIONS

DO-34





XX = MARKING CODE

MARKING DIAGRAM

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. DWG NO. REF: HQ2SD07-DO34-057 REV A.

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