

24V Surface Mount Transient Voltage Suppressor



FEATURES

- AEC-Q101 qualified
- Extremely low clamping voltage
- Bidirectional Transient Voltage Suppressor
- Low leakage current
- Clamping ratio (V_C / Stand-off Voltage) between 1.0~1.05
- Moisture sensitivity level: level 1, per J-STD-020
- RoHS compliant
- Halogen-free

APPLICATIONS

- Transient Surge Protection

MECHANICAL DATA

- Case: DO-214AA (SMB)
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 2 whisker test
- Weight: 0.08g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
V_{WM}	24	V
V_{BR}	35	V
$T_J \text{ MAX}$	175	°C
Package	DO-214AA (SMB)	



DO-214AA (SMB)



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Junction temperature	T_J	-55 to +175	°C
Storage temperature	T_{STG}	-55 to +175	°C

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Part number	Breakdown voltage V_{BR} at I_T (V) (Note 1)		Test current I_T (mA)	Working stand-off voltage V_{WM} (V)	Maximum blocking leakage current I_R at V_{WM} (μA) (Note 1)	Maximum peak impulse current I_{PPM} (A) $t_p = 10/1000$ (μs)	Typical clamping voltage V_C at I_{PPM} (V)
	Min	Max					
LSMB24CAH	31	35	1	24	1	45	24

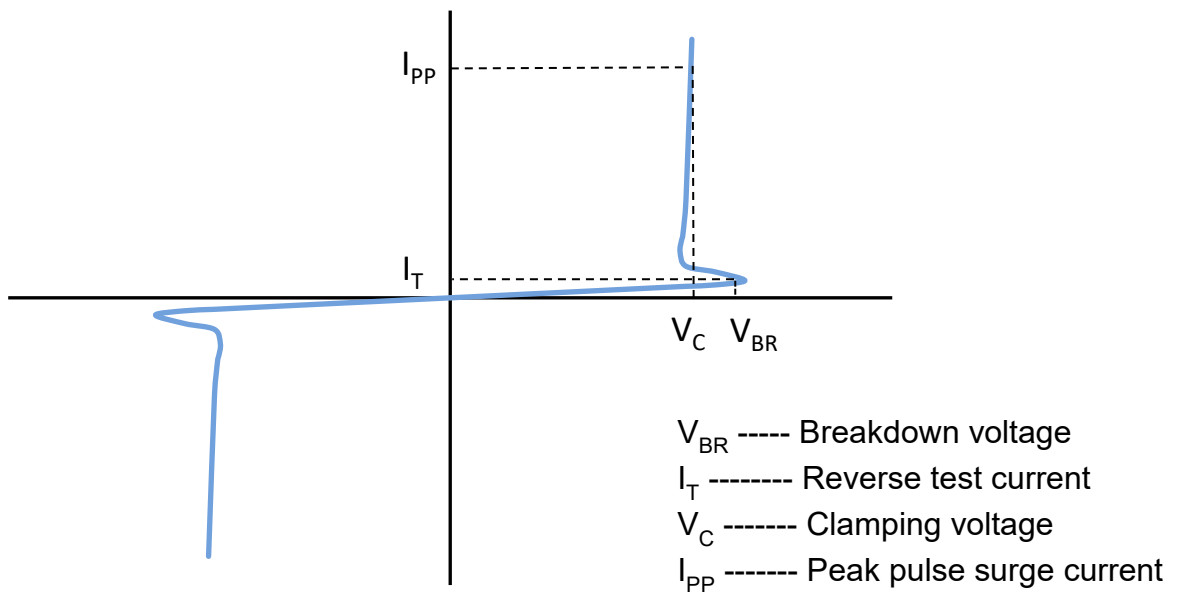
Notes:

1. Pulse test with $PW = 30\text{ms}$

ORDERING INFORMATION

ORDERING CODE	PACKAGE	PACKING
LSMB24CAH	DO-214AA (SMB)	3,000 / Tape & Reel

I - V CURVE CHARACTERISTICS



CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Peak Pulse Power Derating Curve

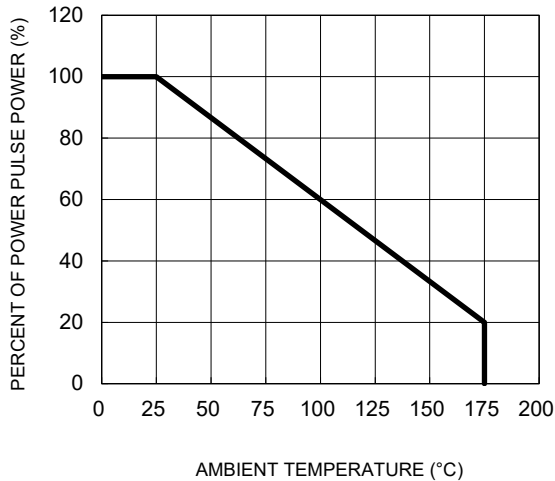


Fig.2 Peak Pulse Current vs. Pulse Time

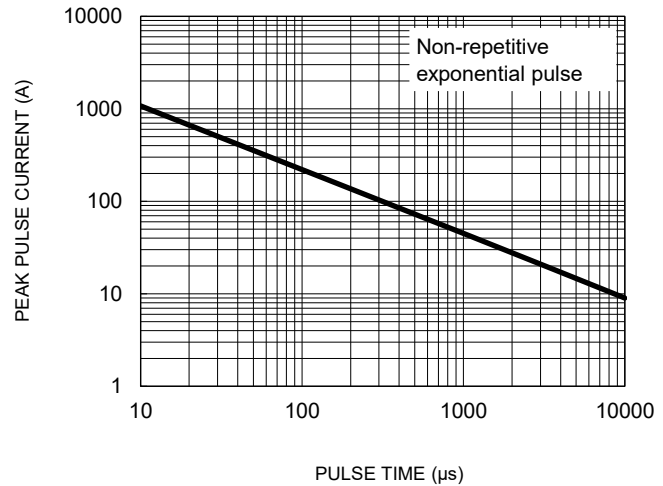


Fig.3 Typical Breakdown Voltage vs. Temperature

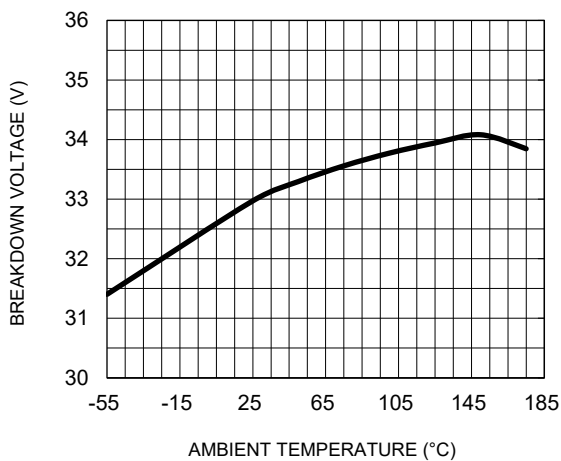


Fig.4 Typical Junction Capacitance

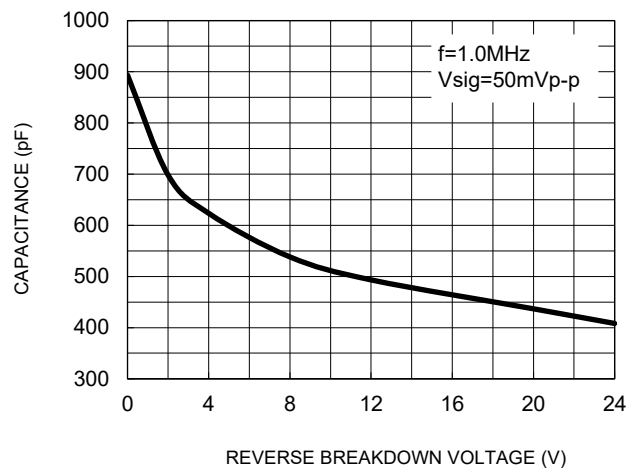
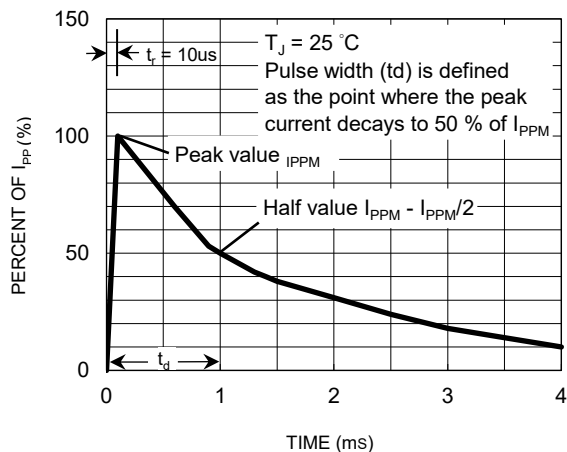
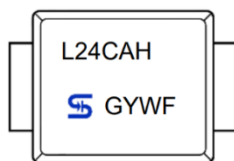
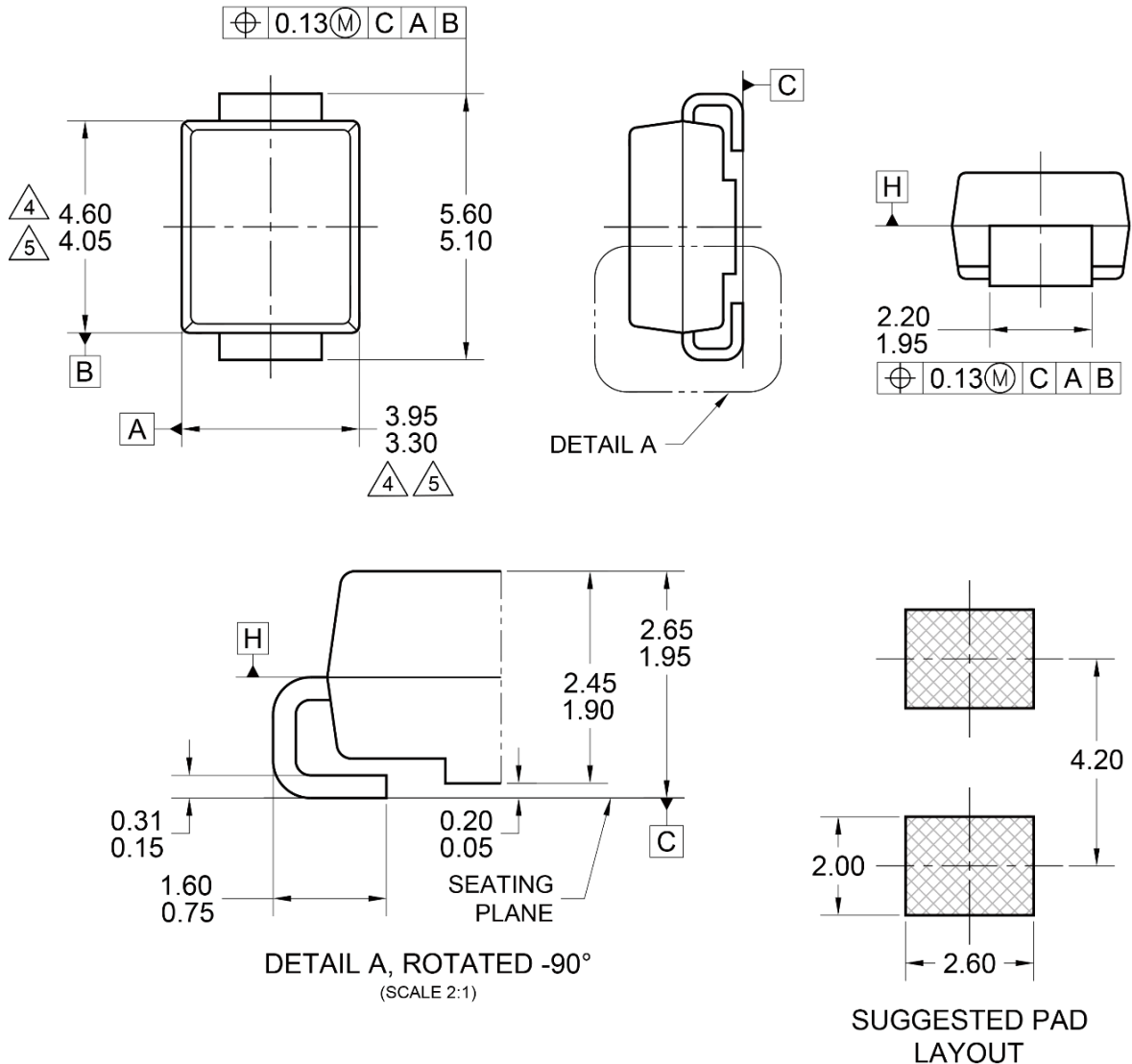


Fig.5 10/1000µs pulse waveform



PACKAGE OUTLINE DIMENSIONS

DO-214AA (SMB)



MARKING DIAGRAM

G = Green compound
YW = Date code
F = Factory code

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. PACKAGE OUTLINE REFERENCE: JEDEC DO-214, VARIATION AA, ISSUE D.
4. MOLDED PLASTIC BODY DIMENSIONS DO NOT INCLUDE MOLD FLASH.
5. MOLDED PLASTIC BODY LATERAL DIMENSIONS TO BE DETERMINED AT DATUM PLANE H.
6. DWG NO. REF: HQ2SD07-DO214SMB-035 REV A.

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