24V Surface Mount Transient Voltage Suppressor

SUPER CLAMP

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
V_{WM}	24	V
V_{BR}	32.5	V
$T_{J\ MAX}$	175	°C
Package	DO-214AB (SMC)	

Pb-Free RoHS COMPLIANT HALOGEN FREE

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-214AB (SMC)
- 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: 0.23g (approximately)

DO-214AB (SMC)

ABSOLUTE MAXIMUM RATINGS (T_A = 25°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°C unless otherwise noted)

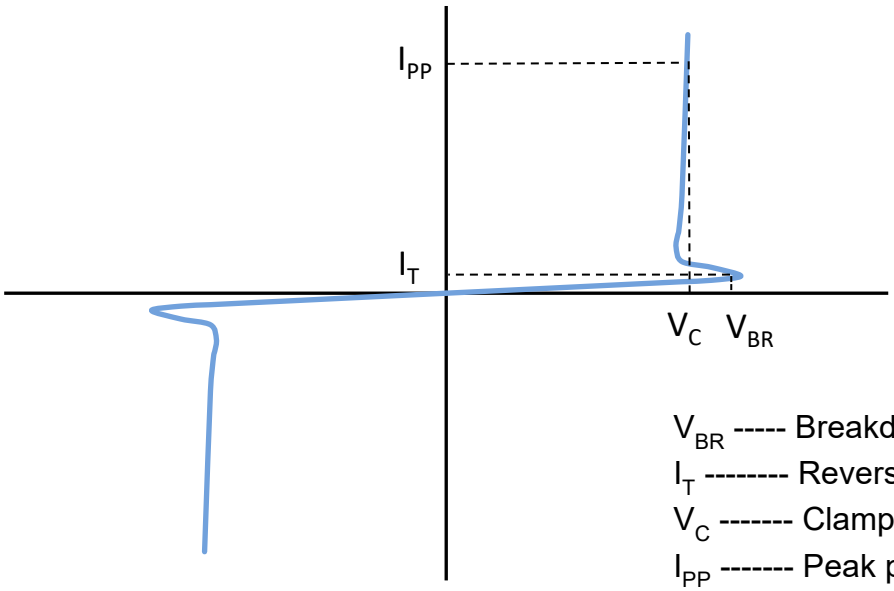
Part number	Breakdown voltage V_{BR} at I_T (V) (Note 1)		Test current I_T (mA)	Working stand-off voltage V_{WM} (V)	Maximum blocking leakage current I_R at V_{WM} (μA) (Note 1)	Maximum peak impulse current I_{PPM} (A) tp =10/1000 (μs)	Typical clamping voltage V_C at I_{PPM} (V)
	Min	Max					
LSMC24CAH	29.5	32.5	1	24	1	170	24

Notes:

1. Pulse test with PW = 30ms

ORDERING INFORMATION		
ORDERING CODE	**PACKAGE**	**PACKING**
LSMC24CAH	DO-214AB (SMC)	3,000 / Tape & Reel

I - V CURVE CHARACTERISTICS



V_{BR} ----- Breakdown voltage
I_T -------- Reverse test current
V_C ------- Clamping voltage
I_{PP} ------- Peak pulse surge current

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Peak Pulse Power Derating Curve

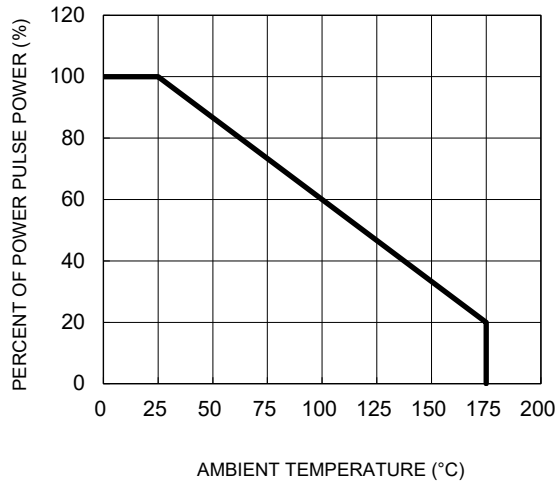


Fig.2 Peak Pulse Current vs. Pulse Time

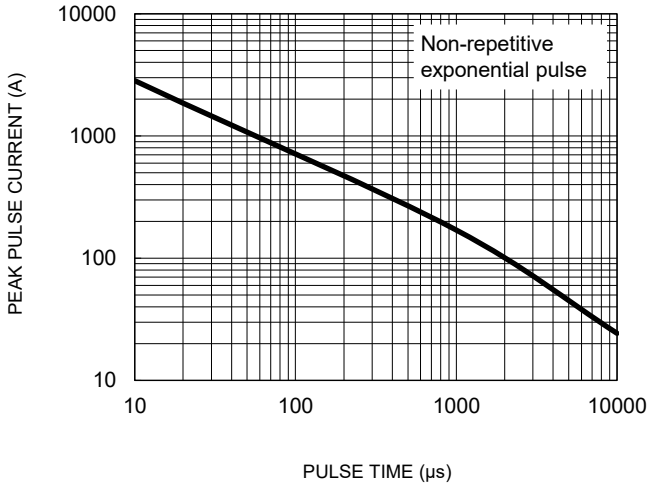


Fig.3 Typical Breakdown Voltage vs. Temperature

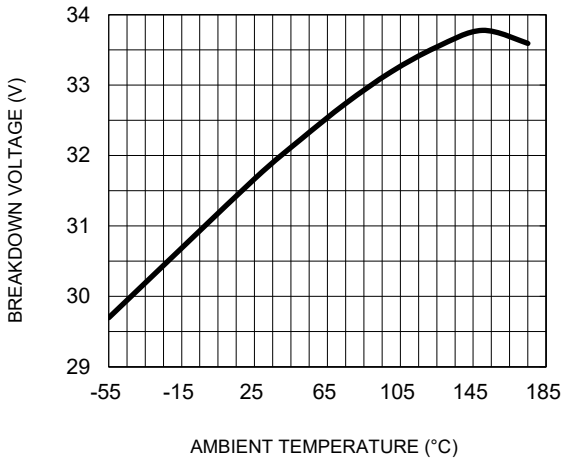


Fig.4 Typical Junction Capacitance

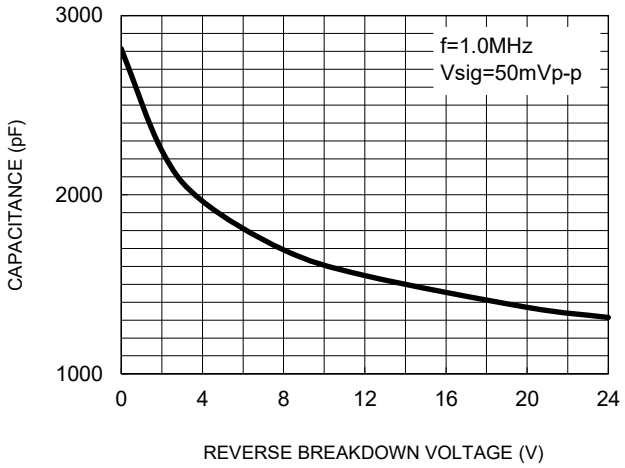
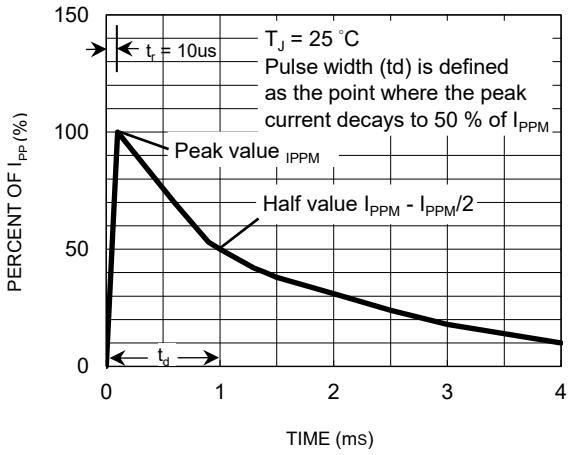
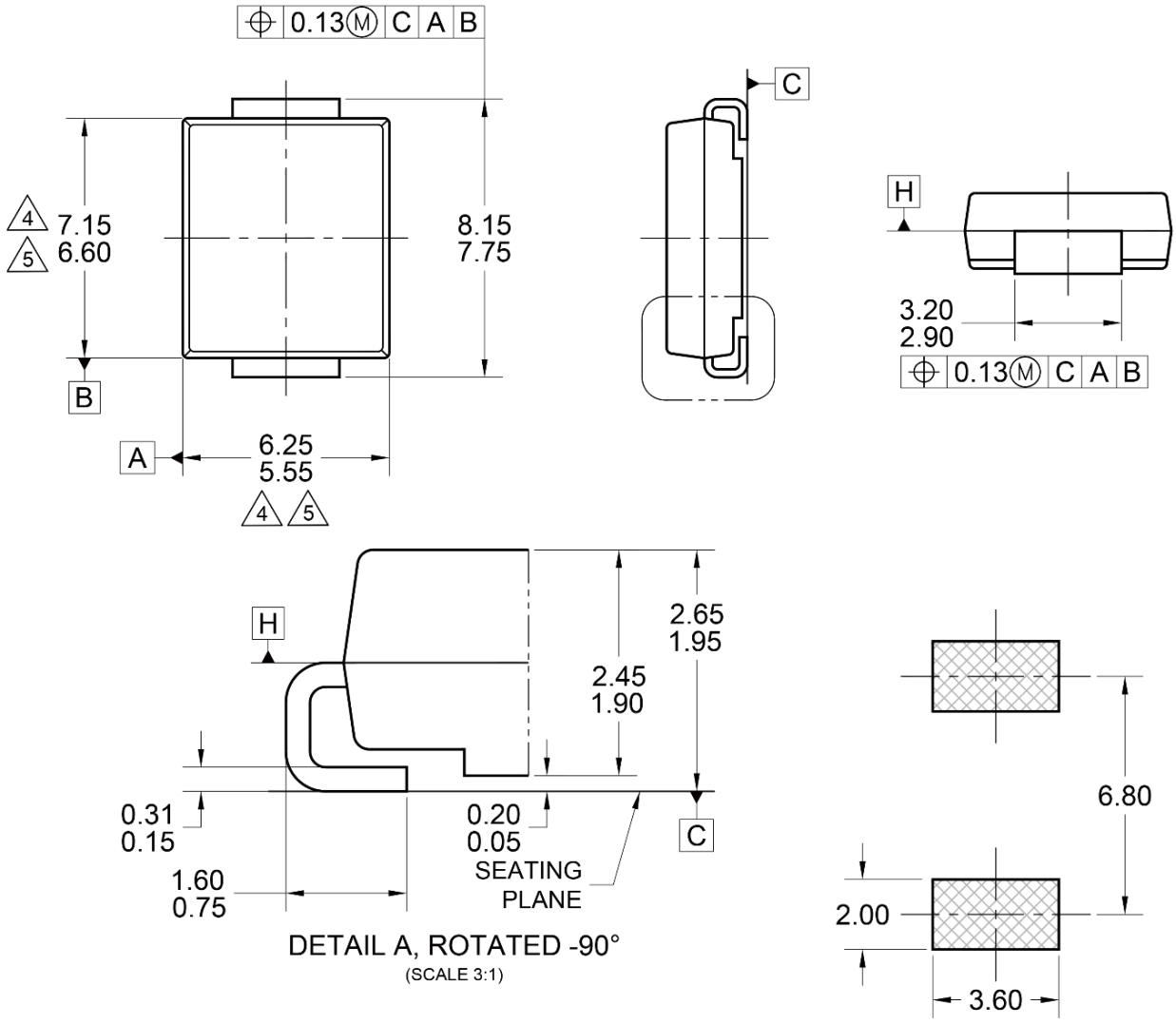


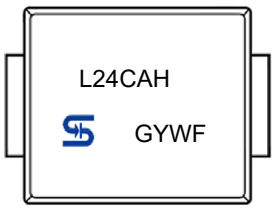
Fig.5 10/1000μs pulse waveform



PACKAGE OUTLINE DIMENSIONS

DO-214AB (SMC)





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 AB, 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-DO214SMC-036 REV A.

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