

## SM8H14CAS-AU ~ SM8H48CAS-AU Series

### 6.6kW Surface Mount Transient Voltage Suppressor

Stand-Off Voltage

14~48V

#### Features

- ISO10605(C=330 pF,R=330Ω): ± 30kV Air, ± 30kV Contact
- HBM  $\geq \pm 8$  kV & CDM  $\geq \pm 2$  kV
- Rated for load dump protection in automotive applications
- Meets ISO 7637-2 / ISO16750-2 Surge specification (varies by test condition)
- Meets MSL Level 1 per J-STD-020
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### Mechanical Data

- Case : Molded plastic, DO-218AB
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 2.821 grams

DO-218AB



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
10/1,000us Peak Pulse Power Dissipation on T <sub>A</sub> = 25 °C (Note 1)	P <sub>PPM1</sub>	6600	W
10/10,000us Peak Pulse Power Dissipation on T <sub>A</sub> = 25 °C	P <sub>PPM2</sub>	5200	W
ISO10605(C=330 pF,R=330Ω) Contact	V <sub>ESD</sub>	30	kV
ISO10605(C=330 pF,R=330Ω) Air	V <sub>ESD</sub>	30	kV
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-55~175	°C

## SM8H14CAS-AU ~ SM8H48CAS-AU Series

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

Part Number	$V_{RWM}$	$V_{BR}$			Reverse Leakage		$V_C @ I_{PP}$ (Note 1)		Typical Temp. Coefficient of $V_{BR}$	Marking Code
		Min.	Max.	$I_T$	$I_R @ V_{RWM}$	$I_R @ V_{RWM}$ $T_J = 175^\circ\text{C}$				
	V	V	V	mA	uA	uA	V	A	%/ $^\circ\text{C}$	
6600W Transient Voltage Suppressor										
SM8H14CAS-AU	14	15.6	17.2	5	1	150	23.2	284	0.078	8H14C
SM8H15CAS-AU	15	16.7	18.5	5	1	150	24.4	270	0.08	8H15C
SM8H16CAS-AU	16	17.8	19.7	5	1	150	26.0	254	0.081	8H16C
SM8H17CAS-AU	17	18.9	20.9	5	1	150	27.6	239	0.082	8H17C
SM8H18CAS-AU	18	20	22.1	5	0.5	150	29.2	226	0.083	8H18C
SM8H20CAS-AU	20	22.2	24.5	5	0.5	150	32.4	204	0.084	8H20C
SM8H22CAS-AU	22	24.4	26.9	5	0.5	150	35.5	186	0.085	8H22C
SM8H24CAS-AU	24	26.7	29.5	5	0.5	150	38.9	170	0.086	8H24C
SM8H26CAS-AU	26	28.9	31.9	5	0.5	150	42.1	157	0.087	8H26C
SM8H28CAS-AU	28	31.1	34.4	5	0.5	150	45.4	145	0.088	8H28C
SM8H30CAS-AU	30	33.3	36.8	5	0.5	150	48.4	136	0.089	8H30C
SM8H33CAS-AU	33	36.7	40.6	5	0.5	150	53.3	124	0.09	8H33C
SM8H36CAS-AU	36	40	44.2	5	0.5	150	58.1	114	0.091	8H36C
SM8H40CAS-AU	40	44.4	49.1	5	0.5	150	64.5	102	0.092	8H40C
SM8H43CAS-AU	43	47.8	52.8	5	0.5	150	69.4	95	0.093	8H43C
SM8H48CAS-AU	48	53.3	58.9	5	0.5	150	80.6	82	0.094	8H48C

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A = 25^\circ\text{C}$  per Fig.1.
2. TVS is a transient protection device, it is strongly recommended not to use as a Zener.

# SM8H14CAS-AU ~ SM8H48CAS-AU Series

## TYPICAL CHARACTERISTIC CURVES

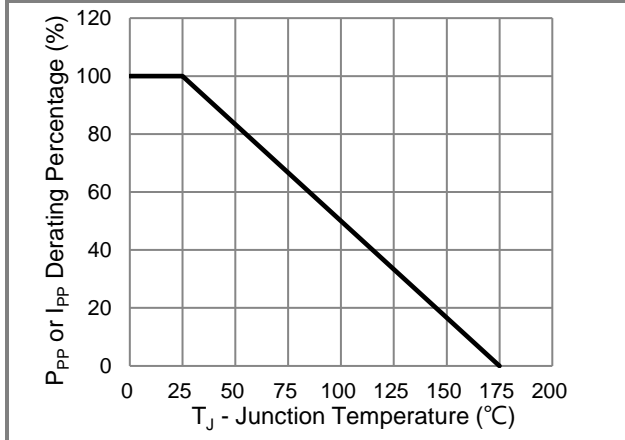


Fig.1 Pulse Power Rating Curve

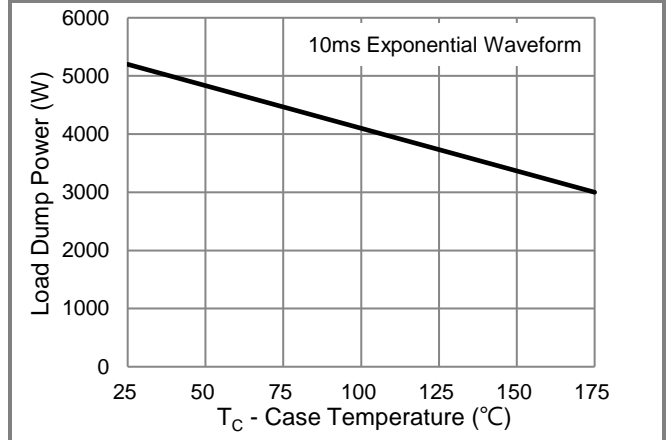


Fig.2 Load Dump Power Characteristics

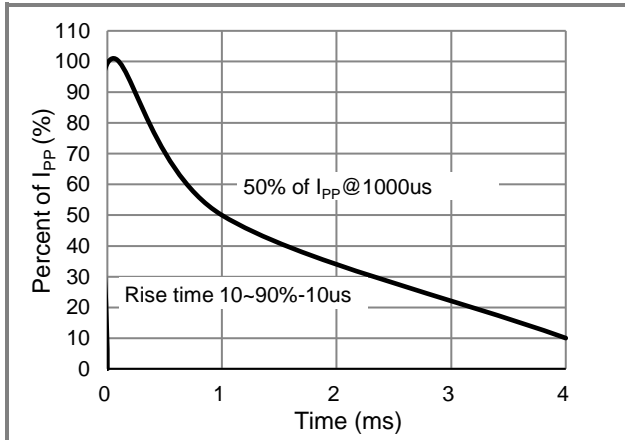


Fig.3 Pulse Waveform

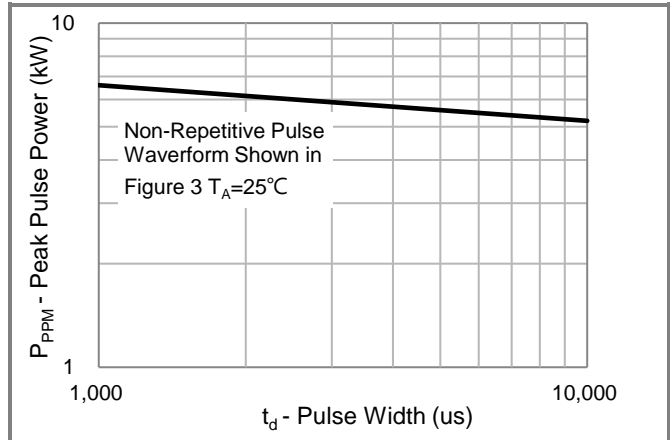


Fig.4 Peak Pulse Power Rating Curve

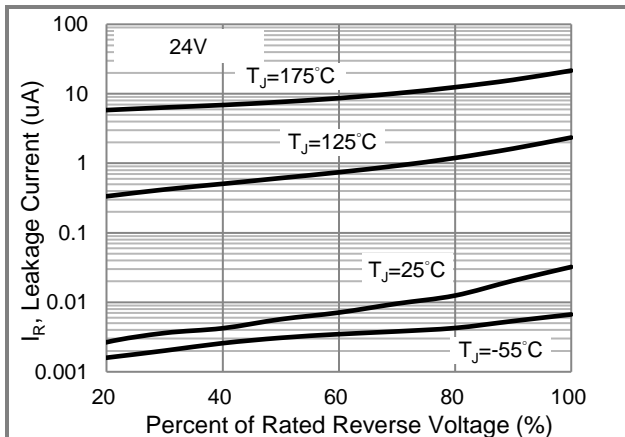


Fig.5 Typical Reverse Characteristics

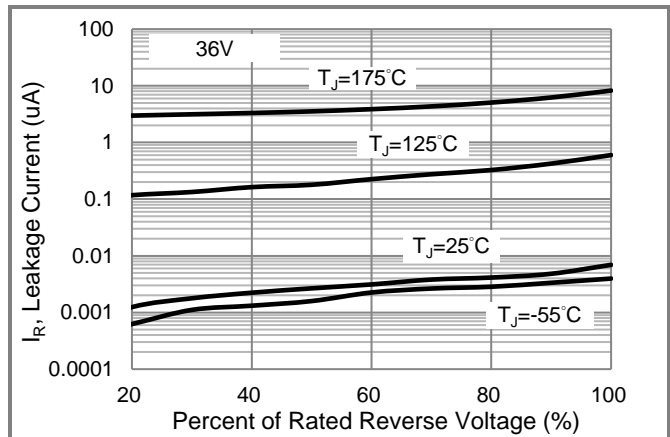


Fig.6 Typical Reverse Characteristics

## SM8H14CAS-AU ~ SM8H48CAS-AU Series

### TYPICAL CHARACTERISTIC CURVES

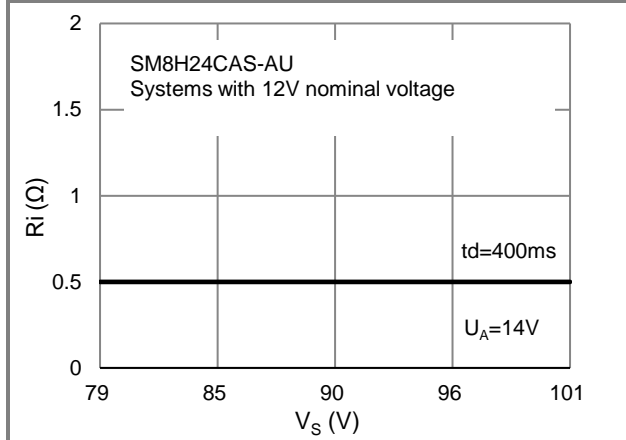


Fig.7 ISO-16750-2 TYPE A

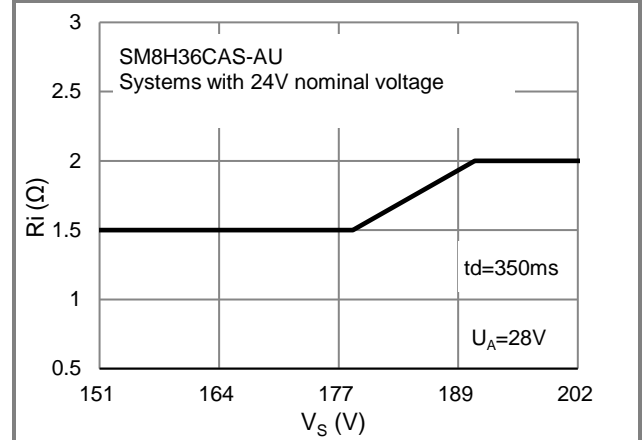


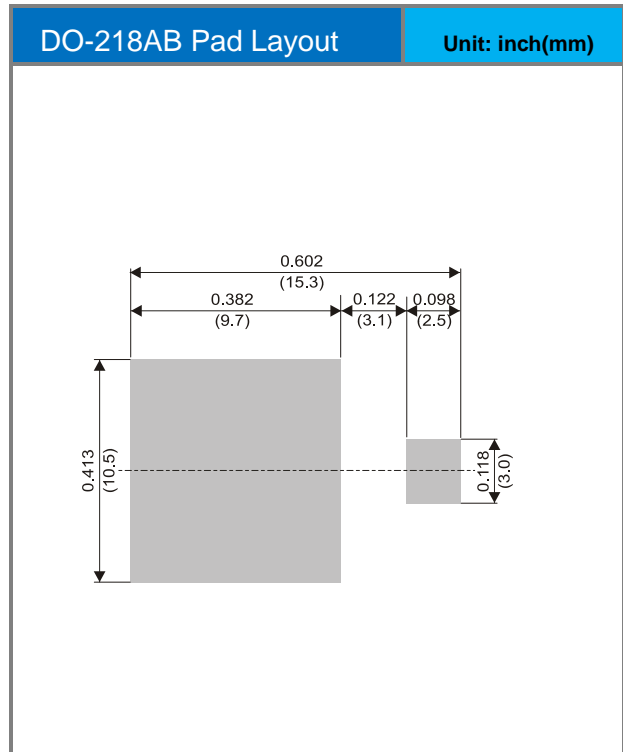
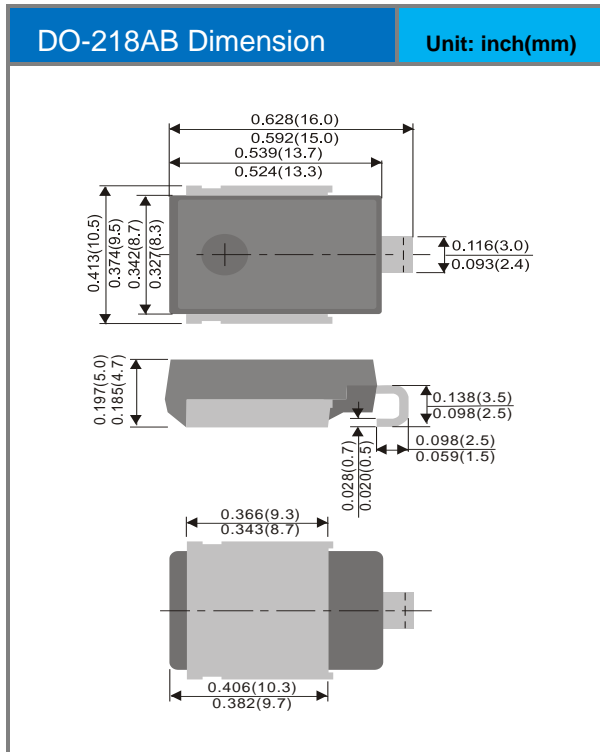
Fig.8 ISO-16750-2 TYPE A

# SM8H14CAS-AU ~ SM8H48CAS-AU Series

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SM8HxxCAS-AU	DO-218AB	600 pcs / 13" reel	See Table

## Packaging Information & Mounting Pad Layout



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