

SM5S14A-AU ~ SM5S48A-AU Series

3.6kW Surface Mount Transient Voltage Suppressor

Stand-Off Voltage

14~48V

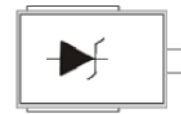
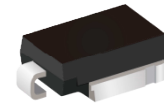
DO-218AB

Features

- ISO10605(C=330 pF,R=330Ω): $\pm 30\text{kV}$ Air, $\pm 30\text{kV}$ Contact
- HBM $\geq \pm 8\text{ kV}$ & CDM $\geq \pm 2\text{ kV}$
- 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 : Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.099 ounces, 2.821 grams



Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
10/1,000us Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$ (Note 1)	P_{PPM1}	3600	W
10/10,000us Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$	P_{PPM2}	2800	W
Peak Surge Current (60Hz half wave)	I_{FSM}	500	A
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	1	$^\circ\text{C/W}$
Power Dissipation on infinite heatsink $T_C = 25^\circ\text{C}$	P_D	5	W
ISO10605(C=330 pF,R=330Ω) Contact	V_{ESD}	30	kV
ISO10605(C=330 pF,R=330Ω) Air	V_{ESD}	30	kV
Operating and Storage Temperature Range	T_J, T_{STG}	-55~175	$^\circ\text{C}$



SM5S14A-AU ~ SM5S48A-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)		Marking Code
		Min.	Max.	I _T	I _R @V _{RWM}	I _R @V _{RWM} T _J =175 °C			
	V	V	V	mA	μA	μA	V	A	
3600W Transient Voltage Suppressor									
SM5S14A-AU	14	15.6	17.2	5	1	150	23.2	155	6ENM
SM5S15A-AU	15	16.7	18.5	5	1	150	24.4	148	6ENN
SM5S16A-AU	16	17.8	19.7	5	1	150	26	138	6ENP
SM5S17A-AU	17	18.9	20.9	5	1	150	27.6	130	6ENQ
SM5S18A-AU	18	20	22.1	5	0.5	150	29.2	123	6ENR
SM5S20A-AU	20	22.2	24.5	5	0.5	150	32.4	111	6ENS
SM5S22A-AU	22	24.4	26.9	5	0.5	150	35.5	101	6ENT
SM5S24A-AU	24	26.7	29.5	5	0.5	150	38.9	93	6ENU
SM5S26A-AU	26	28.9	31.9	5	0.5	150	42.1	86	6ENV
SM5S28A-AU	28	31.1	34.4	5	0.5	150	45.4	79	6ENW
SM5S30A-AU	30	33.3	36.8	5	0.5	150	48.4	74	6ENX
SM5S33A-AU	33	36.7	40.6	5	0.5	150	53.3	68	6ENY
SM5S36A-AU	36	40	44.2	5	0.5	150	58.1	62	6ENZ
SM5S40A-AU	40	44.4	49.1	5	0.5	150	64.5	56	6EPD
SM5S43A-AU	43	47.8	52.8	5	0.5	150	69.4	52	6EPE
SM5S48A-AU	48	53.3	58.7	5	0.5	150	80.6	45	6EPF

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.

SM5S14A-AU ~ SM5S48A-AU Series

TYPICAL CHARACTERISTIC CURVES

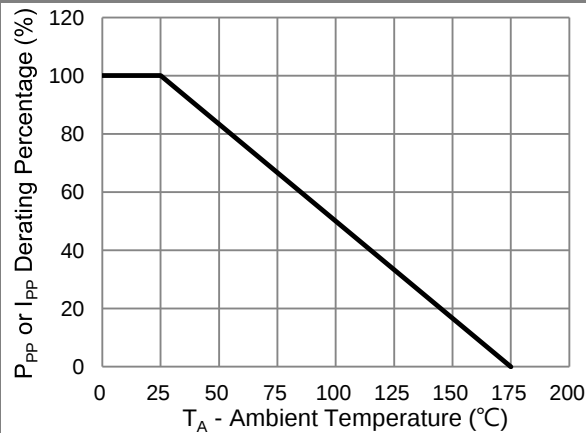


Fig.1 Pulse Power Rating Curve

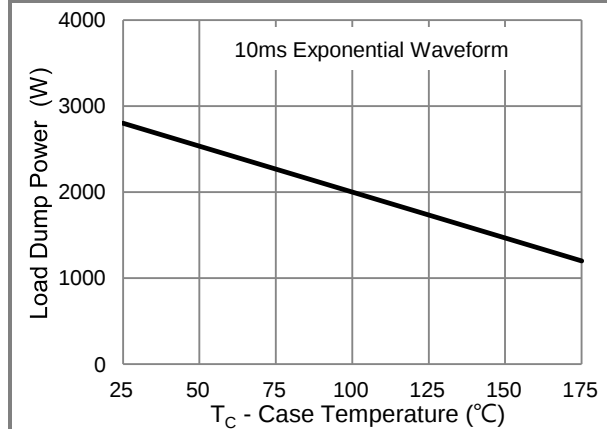


Fig.2 Load Dump Power Characteristics

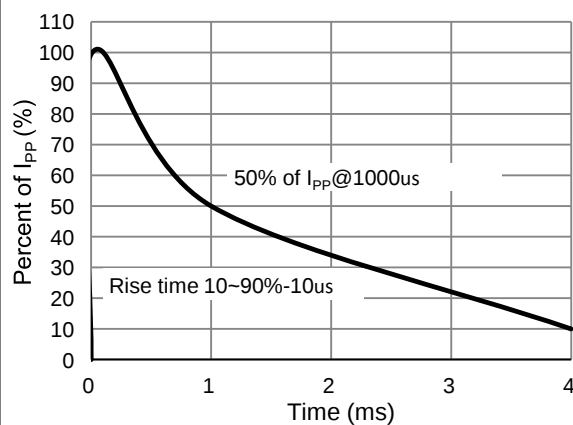


Fig.3 Pulse Waveform

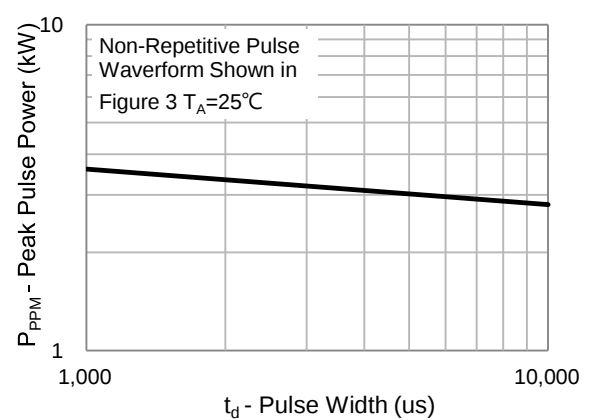


Fig.4 Peak Pulse Power Rating Curve

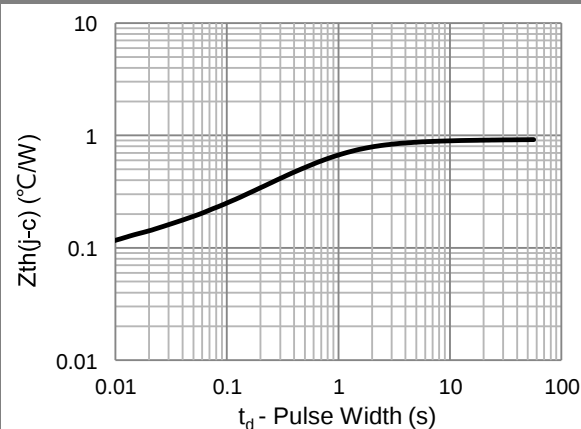


Fig.5 Typical Transient Thermal Impedance

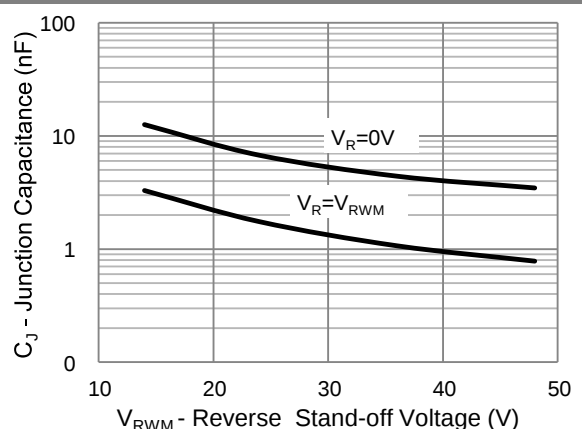


Fig.6 Typical Capacitance

SM5S14A-AU ~ SM5S48A-AU Series

TYPICAL CHARACTERISTIC CURVES

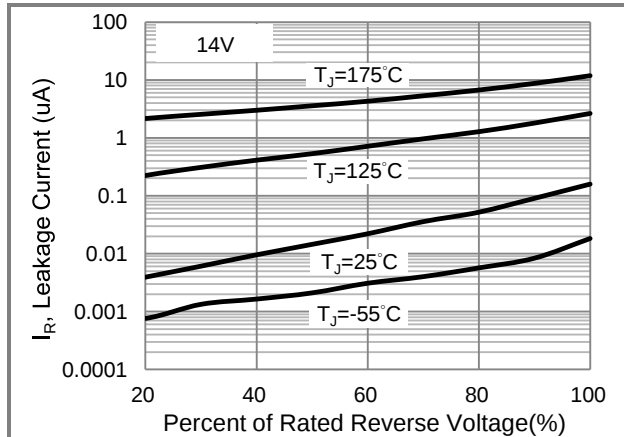


Fig.7 Typical Reverse Characteristics

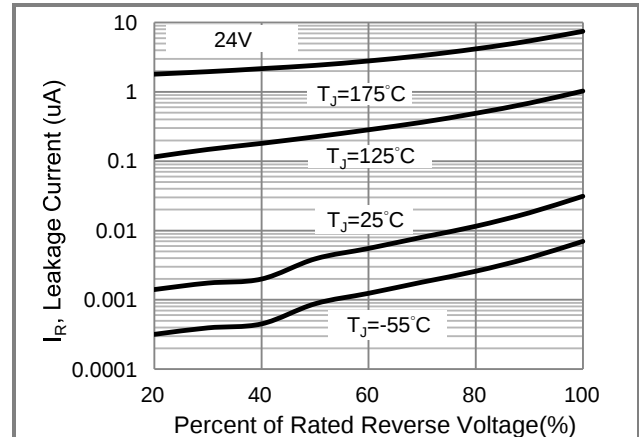


Fig.8 Typical Reverse Characteristics

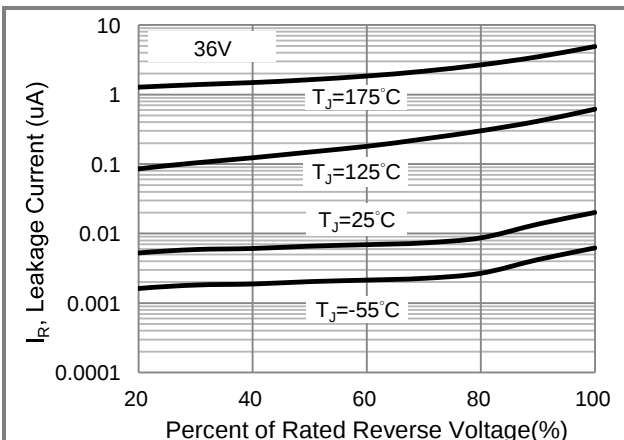


Fig.9 Typical Reverse Characteristics

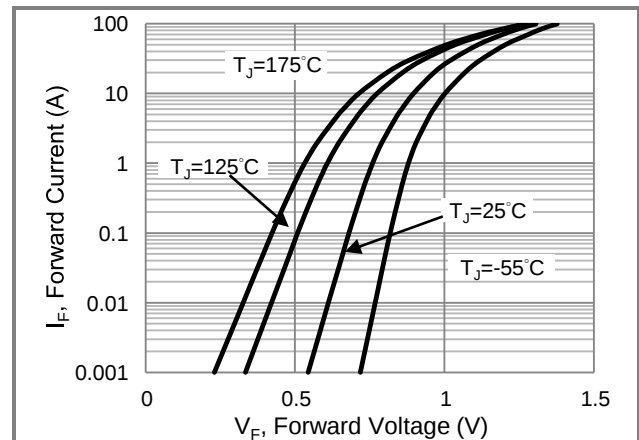


Fig.10 Typical Forward Characteristics

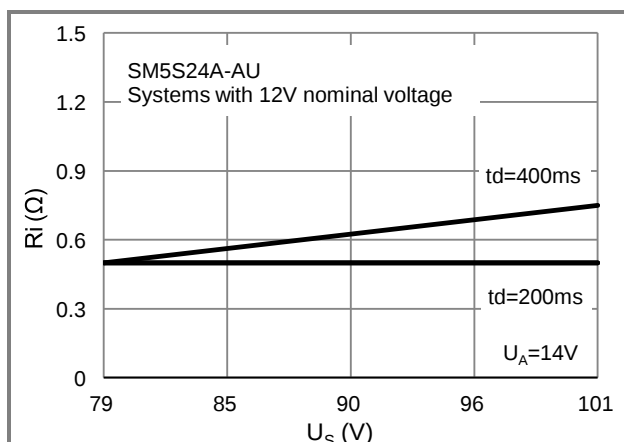


Fig.11 ISO-16750-2 TYPE A

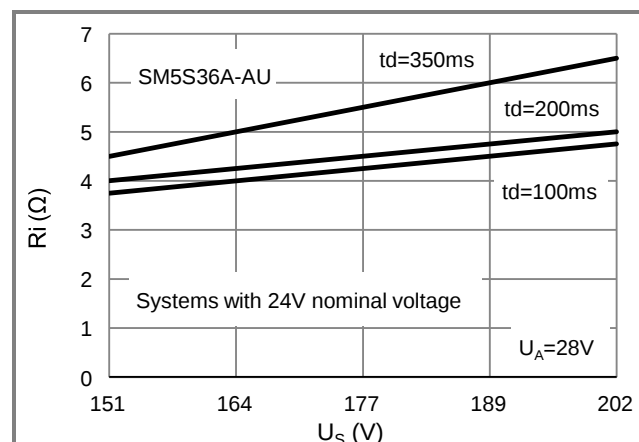


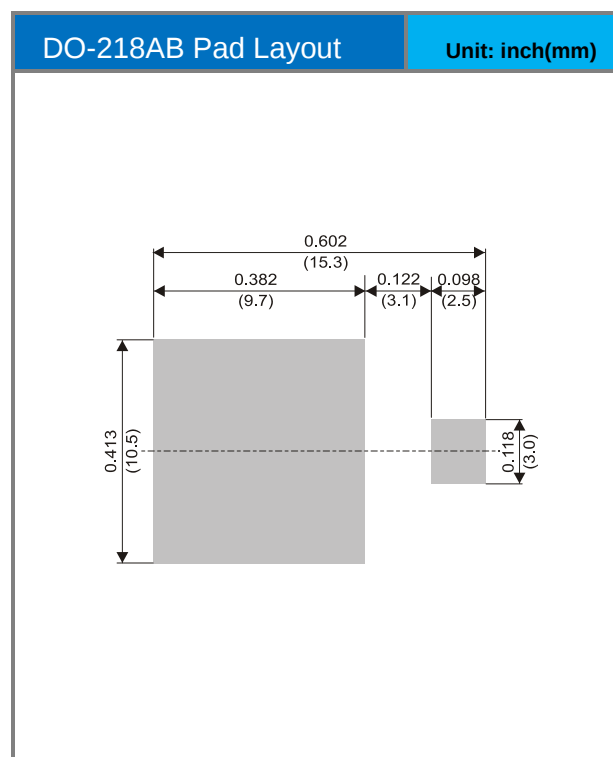
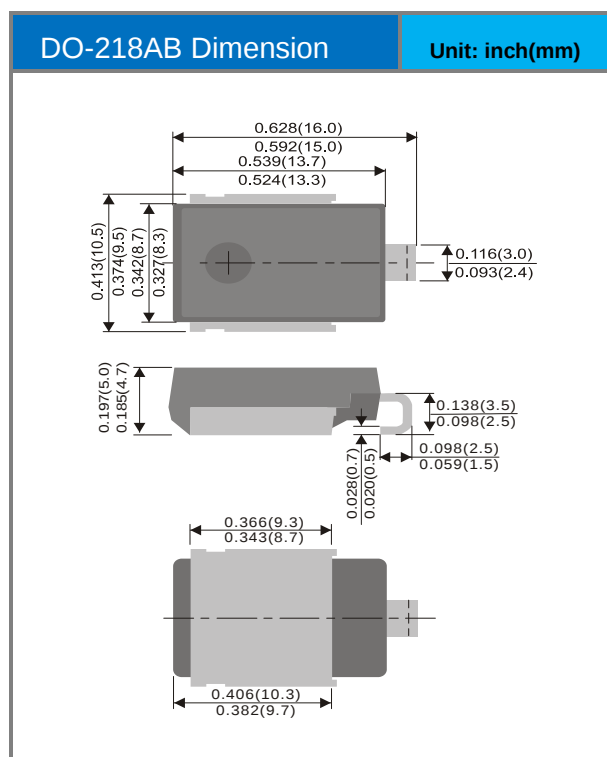
Fig.12 ISO-16750-2 TYPE A

SM5S14A-AU ~ SM5S48A-AU Series

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
SM5SxxA-AU_R2_000A1	DO-218AB	600 pcs / 13" reel	See Table	Halogen free

Packaging Information & Mounting Pad Layout





SM5S14A-AU ~ SM5S48A-AU Series

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Panjit:

[SM5S28A-AU_R2_000A1](#)