



4.6KSMJX14A-AU~4.6KSMJX36A-AU

4.6kW SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Stand-Off Voltage

14~36V

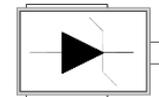
Features

- Rated for load dump protection (ISO 16750-2) in automotive applications
- Reliable operation at maximum $T_J=175^\circ\text{C}$
- Low leakage current
- Unidirectional operation
- AEC-Q101 qualified
- Meets ISO 7637-2 Requirements
- Meets MSL Level 1 per J-STD-020
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 Std.

Mechanical Data

- Case : DO-218AC
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Headsink is the anode

DO-218AC



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

RATING	SYMBOL	LIMIT	UNIT
10/1,000 μs Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$ (Notes 1)	P_{PPM1}	4600	W
10/10,000 μs Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$	P_{PPM2}	3600	W
Peak Surge Current (60Hz half wave)	I_{FSM}	600	A
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	0.95	$^\circ\text{C/W}$
Power Dissipation on infinite heatsink $T_A = 25^\circ\text{C}$	P_D	6	W
IEC61000-4-2 Contact	V_{ESD}	8	kV
IEC61000-4-2 Air	V_{ESD}	15	kV
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to 175	$^\circ\text{C}$

Notes : 1. Non-repetitive pulse. Derate over $T_A = 25^\circ\text{C}$.



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

Part Number	Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Reverse Leakage	Max. Clamp Voltage ⁽²⁾	Peak Pulse Current ⁽²⁾	Marking Code
	V_{RWM}	$V_{BR} @ I_T$		I_T	$I_R @ V_{RWM}$	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	I_{PP}	
		Min.	Max.		Max.	Max.			
	V	V	V	mA	μA	μA	V	A	
4.6KSMJX14A-AU	14	15.6	17.2	5	0.5	150	23.2	198	4XEK
4.6KSMJX20A-AU	20	22.2	24.5	5	0.5	150	32.4	142	4XEV
4.6KSMJX22A-AU	22	24.4	26.9	5	0.5	150	35.5	130	4XEX
4.6KSMJX24A-AU	24	26.7	29.5	5	0.5	150	38.9	118	4XEZ
4.6KSMJX33A-AU	33	36.7	40.6	5	0.5	150	53.3	86	4XFM
4.6KSMJX36A-AU	36	40	44.2	5	0.5	150	58.1	79	4XFP

Notes : 2. 10/1,000 μs surge pulse waveform.



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Typical Characteristic Curves

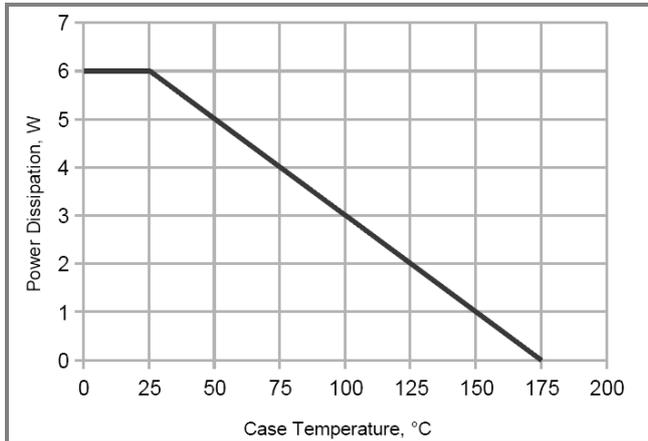


Fig.1 DC Power Derating Curve

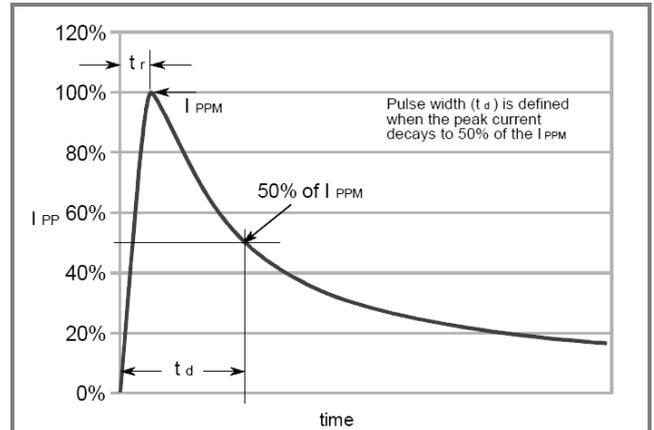


Fig.2 Pulse Waveform Definition

($t_r / t_d = 10/1,000\mu s$ or $10/10,000\mu s$)

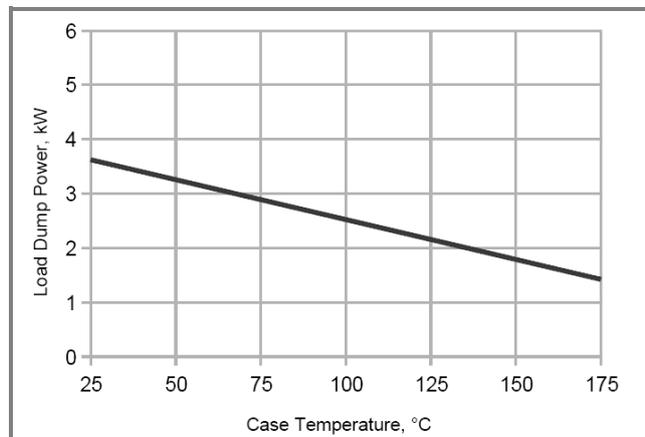


Fig.3 Load Dump Power vs Case Temperature

(10ms Exponential Waveform)



Fig.4 Reverse Power Capability

(Exponential Waveform)

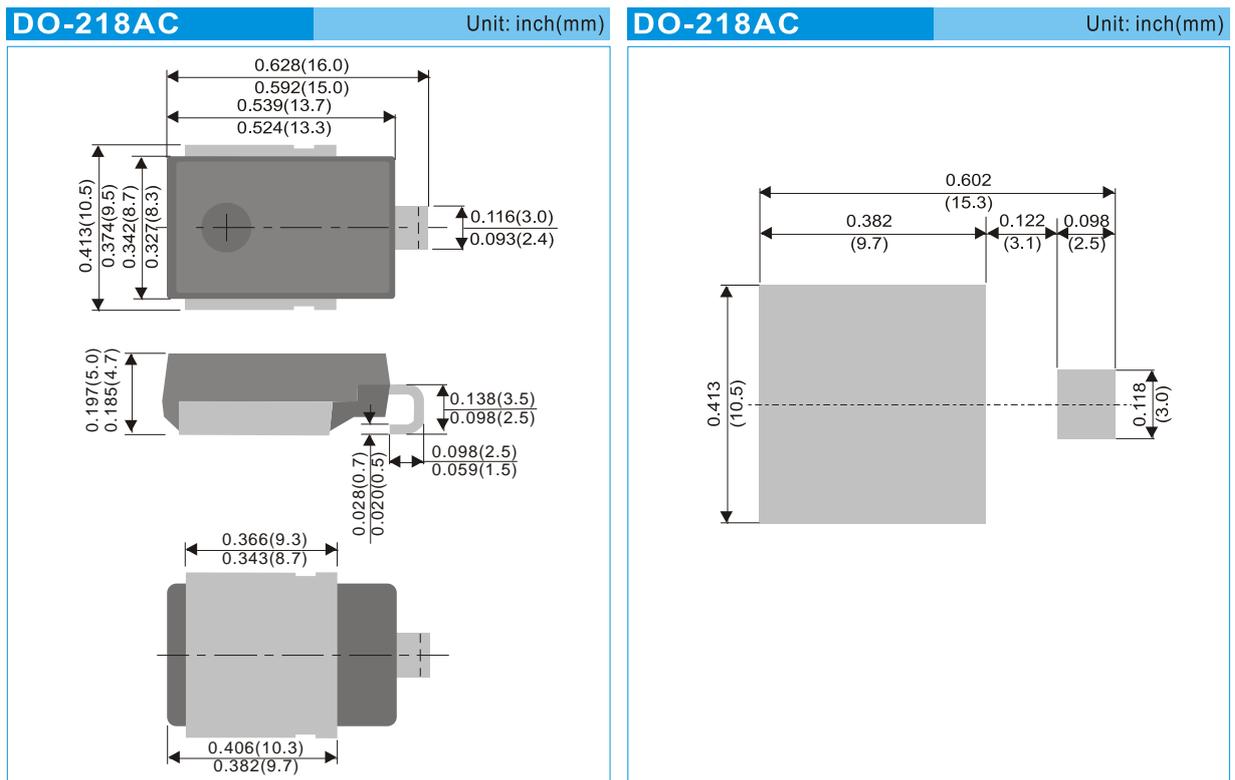


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Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
4.6KSMJX14A-AU_R2_000A1	DO-218AC	600 pcs / 13" reel	4XEK	Halogen free
4.6KSMJX14A-AU_S2_000A1	DO-218AC	600 pcs / 13" reel	4XEK	Halogen free

Packaging Information & Mounting Pad Layout





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