



6.6KSMJX14A-AU SERIES

6.6kW SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Stand-Off Voltage

14~43V

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
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Meets ISO 7637-2 Requirements
- Meets MSL Level 1 per J-STD-020
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

Mechanical Data

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



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}	6600	W
10/10,000 μs Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$	P_{PPM2}	5200	W
Peak Surge Current (60Hz half wave)	I_{FSM}	700	A
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	0.9	$^\circ\text{C/W}$
Power Dissipation on infinite heatsink $T_A = 25^\circ\text{C}$	P_D	8	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	Max. Clamp Voltage ⁽²⁾	Peak Pulse Current ⁽²⁾	Marking Code
	V_{RWM}	$V_{BR} @ I_T$		I_T	$I_R @ V_{RWM}$	$V_C @ I_{PP}$	I_{PP}	
		Min.	Max.					
	V	V	V	mA	μA	V	A	
6.6KSMJX14A-AU	14	15.6	17.2	5	10	23.2	284	6XEK
6.6KSMJX20A-AU	20	22.2	24.5	5	10	32.4	204	6XEV
6.6KSMJX22A-AU	22	24.4	26.9	5	10	35.5	186	6XEX
6.6KSMJX24A-AU	24	26.7	29.5	5	10	38.9	170	6XEZ
6.6KSMJX33A-AU	33	36.7	40.6	5	10	53.3	124	6XFM
6.6KSMJX36A-AU	36	40	44.2	5	10	58.1	114	6XFP
6.6KSMJX43A-AU	43	47.8	52.8	5	10	69.4	95	6XFT

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



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Typical Characteristic Curves

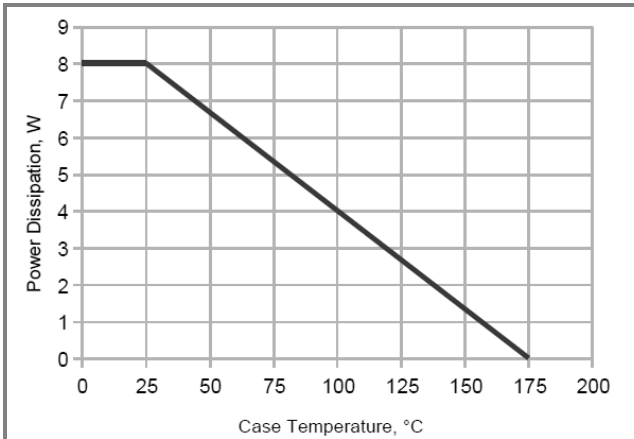


Fig.1 DC Power Derating Curve

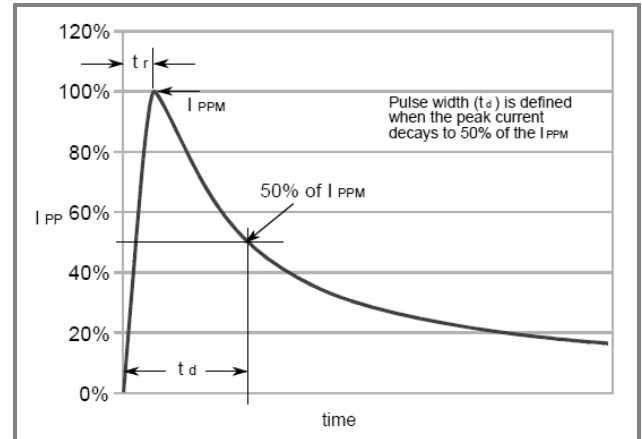


Fig.2 Pulse Waveform Definition
($t_r / t_d = 10/1,000\mu s$ or $10/10,000\mu s$)

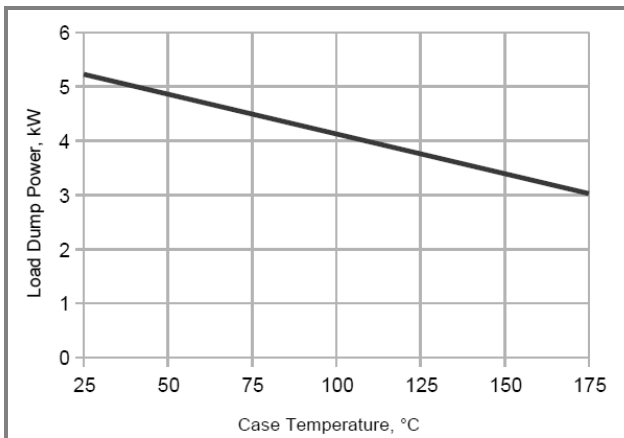


Fig.3 Load Dump Power vs Case Temperature
(10ms Exponential Waveform)

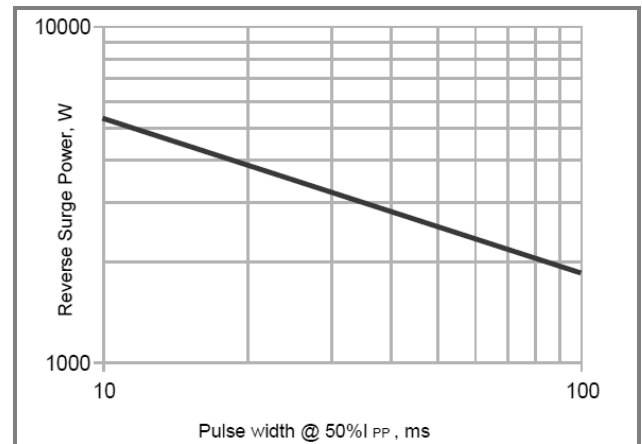
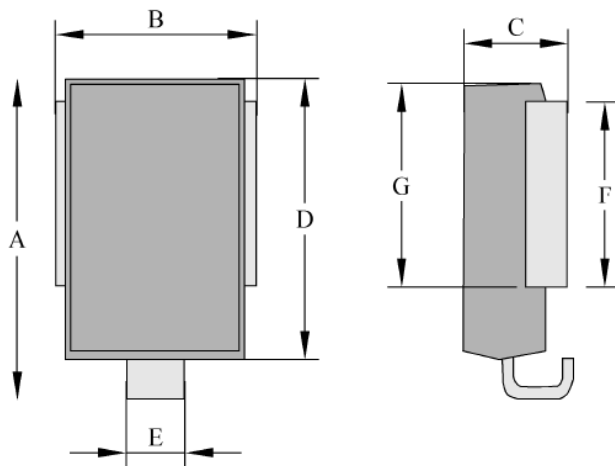


Fig.4 Reverse Power Capability
(Exponential Waveform)



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Packaging Information Unit (mm)



DIMENSION	MIN	MAX
A	15.0	16.0
B	9.5	10.5
C	4.7	5.0
D	13.3	13.7
E	2.4	3.0
F	8.7	9.3
G	9.7	10.3



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