



## 6.6KSMJX14A-AU~6.6KSMJX48A-AU

### 6.6kW SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

**Stand-Off Voltage**

**14~48V**

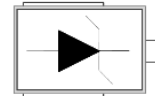
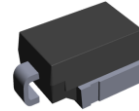
#### Features

- 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 $\mu\text{s}$ Peak Pulse Power Dissipation on $T_A = 25^\circ\text{C}$ (Notes 1)	$P_{PPM1}$	6600	W
10/10,000 $\mu\text{s}$ 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	Reverse Leakage	Max. Clamp Voltage <sup>(2)</sup>	Peak Pulse Current <sup>(2)</sup>	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	$\mu\text{A}$	$\mu\text{A}$	V	A	
6.6KSMJX14A-AU	14	15.6	17.2	5	0.5	150	23.2	284	6XEK
6.6KSMJX20A-AU	20	22.2	24.5	5	0.5	150	32.4	204	6XEV
6.6KSMJX22A-AU	22	24.4	26.9	5	0.5	150	35.5	186	6XEX
6.6KSMJX24A-AU	24	26.7	29.5	5	0.5	150	38.9	170	6XEZ
6.6KSMJX33A-AU	33	36.7	40.6	5	0.5	150	53.3	124	6XFM
6.6KSMJX36A-AU	36	40	44.2	5	0.5	150	58.1	114	6XFP
6.6KSMJX43A-AU	43	47.8	52.8	5	0.5	150	69.4	95	6XFT
6.6KSMJX48A-AU	48	53.3	58.7	5	0.5	150	80.6	81.84	6XFU

Notes : 2. 10/1,000 $\mu\text{s}$  surge pulse waveform.



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### Typical Characteristic Curves

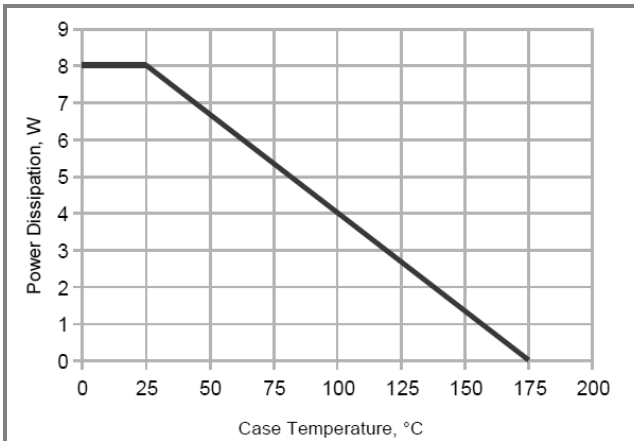


Fig.1 DC Power Derating Curve

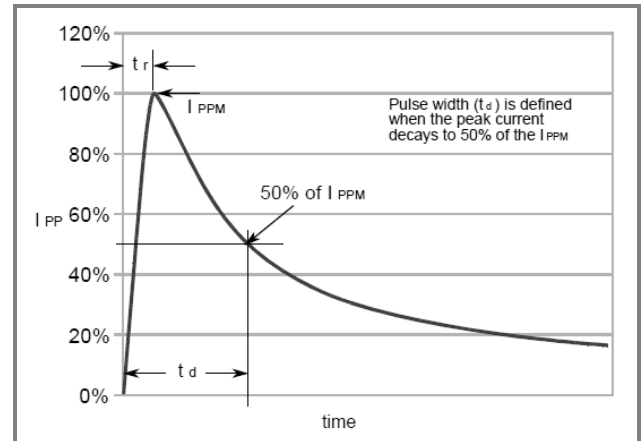


Fig.2 Pulse Waveform Definition  
( $t_r / t_d = 10/1,000\mu s$  or  $10/10,000\mu s$ )

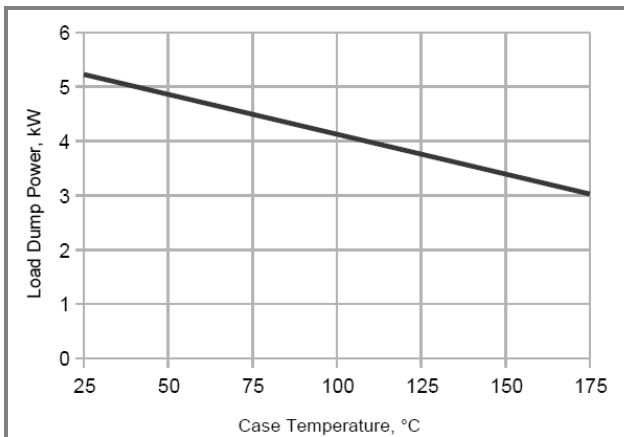


Fig.3 Load Dump Power vs Case Temperature  
(10ms Exponential Waveform)

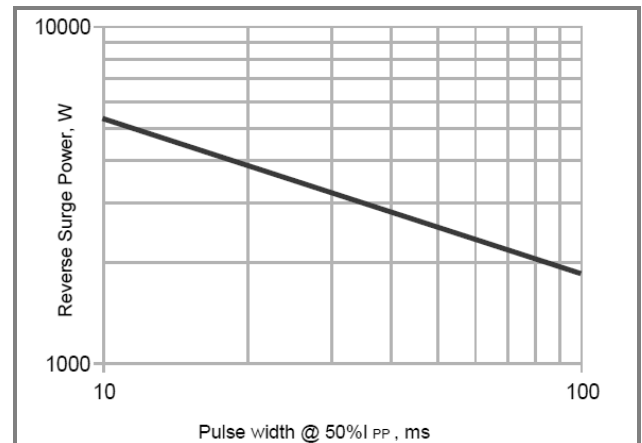


Fig.4 Reverse Power Capability  
(Exponential Waveform)



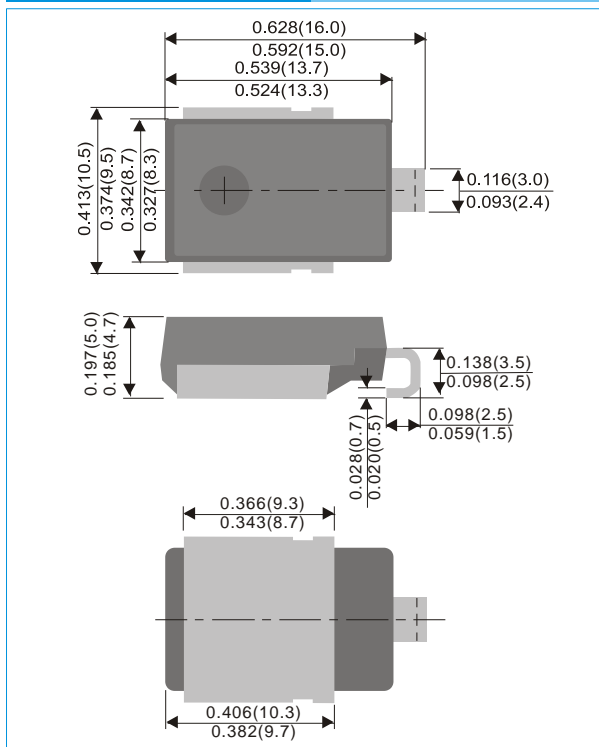
## 6.6KSMJX14A-AU~6.6KSMJX48A-AU

### Part No Packing Code Version

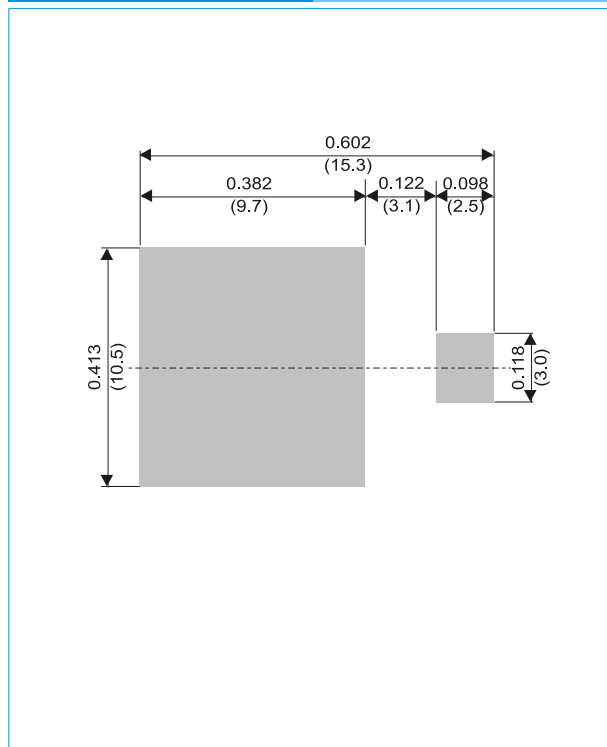
Part No Packing Code	Package Type	Packing Type	Marking	Version
6.6KSMJX14A-AU_R2_000A1	DO-218AC	600 pcs / 13" reel	6XEK	Halogen free
6.6KSMJX14A-AU_S2_000A1	DO-218AC	600 pcs / 13" reel	6XEK	Halogen free

### Packaging Information & Mounting Pad Layout

**DO-218AC** Unit: inch(mm)



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