



# P4KE10AS ~ P4KE250CAS Series

## Surface Mount Transient Voltage Suppressor

**Voltage** 10~250 V **Power** 400 W

### Features

- For surface mounted applications in order to optimize board space.
- Low inductance
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case : DO-41 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0119 ounces, 0.336 grams

DO-41



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

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp = 10 / 1000 us)	P <sub>PP</sub> <sup>(1) (2)</sup>	400	W
Peak Pulse Current on tp = 10 / 1000 us waveform <sup>(Fig.2)</sup>	I <sub>PPM</sub> <sup>(1)</sup>	See table 1	A
Power Dissipation on Infinite Heat Sink at T <sub>L</sub> = 75 °C	P <sub>D</sub>	1.5	W
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	±30	kV
ESD IEC61000-4-2(Contact)		±30	
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub> <sup>(3)</sup>	80	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



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### Electrical Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

Part Number		V <sub>RWM</sub>	V <sub>BR</sub>			I <sub>R</sub>		V <sub>C@IPP</sub>		Marking Code	
			Min.	Max.	I <sub>T</sub>	@ V <sub>RWM</sub>	uA				
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
400W Transient Voltage Suppressor											
P4KE10AS	P4KE10CAS	8.55	9.5	10.5	1	10	20	14.5	29	P4KE10AS	P4KE10CAS
P4KE11AS	P4KE11CAS	9.4	10.5	11.6	1	5	10	15.6	27	P4KE11AS	P4KE11CAS
P4KE12AS	P4KE12CAS	10.2	11.4	12.6	1	1	1	16.7	25	P4KE12AS	P4KE12CAS
P4KE13AS	P4KE13CAS	11.1	12.4	13.7	1	1	1	18.2	23	P4KE13AS	P4KE13CAS
P4KE15AS	P4KE15CAS	12.8	14.3	15.8	1	1	1	21.2	20	P4KE15AS	P4KE15CAS
P4KE16AS	P4KE16CAS	13.6	15.2	16.8	1	1	1	22.5	19	P4KE16AS	P4KE16CAS
P4KE18AS	P4KE18CAS	15.3	17.1	18.9	1	1	1	25.2	17	P4KE18AS	P4KE18CAS
P4KE20AS	P4KE20CAS	17.1	19	21	1	1	1	27.7	15	P4KE20AS	P4KE20CAS
P4KE22AS	P4KE22CAS	18.8	20.9	23.1	1	1	1	30.6	14	P4KE22AS	P4KE22CAS
P4KE24AS	P4KE24CAS	20.5	22.8	25.2	1	1	1	33.2	13	P4KE24AS	P4KE24CAS
P4KE27AS	P4KE27CAS	23.1	25.7	28.4	1	1	1	37.5	11.2	P4KE27AS	P4KE27CAS
P4KE30AS	P4KE30CAS	25.6	28.5	31.5	1	1	1	41.4	10	P4KE30AS	P4KE30CAS
P4KE33AS	P4KE33CAS	28.2	31.4	34.7	1	1	1	45.7	9	P4KE33AS	P4KE33CAS
P4KE36AS	P4KE36CAS	30.8	34.2	37.8	1	1	1	49.9	8.4	P4KE36AS	P4KE36CAS
P4KE39AS	P4KE39CAS	33.3	37.1	41	1	1	1	53.9	7.8	P4KE39AS	P4KE39CAS
P4KE43AS	P4KE43CAS	36.8	40.9	45.2	1	1	1	59.3	7.1	P4KE43AS	P4KE43CAS
P4KE47AS	P4KE47CAS	40.2	44.7	49.4	1	1	1	64.8	5	P4KE47AS	P4KE47CAS
P4KE51AS	P4KE51CAS	43.6	48.5	53.6	1	1	1	70.1	6	P4KE51AS	P4KE51CAS
P4KE56AS	P4KE56CAS	47.8	53.2	58.8	1	1	1	77	5.5	P4KE56AS	P4KE56CAS
P4KE62AS	P4KE62CAS	53	58.9	65.1	1	1	1	85	5	P4KE62AS	P4KE62CAS
P4KE68AS	P4KE68CAS	58.1	64.6	71.4	1	1	1	92	4.6	P4KE68AS	P4KE68CAS
P4KE75AS	P4KE75CAS	64.1	71.3	78.8	1	1	1	103	4.1	P4KE75AS	P4KE75CAS
P4KE82AS	P4KE82CAS	70.1	77.9	86.1	1	1	1	113	3.7	P4KE82AS	P4KE82CAS
P4KE91AS	P4KE91CAS	77.8	86.5	95.5	1	1	1	125	3.4	P4KE91AS	P4KE91CAS
P4KE100AS	P4KE100CAS	85.5	95	105	1	1	1	137	3.1	P4KE100AS	P4KE100CAS
P4KE110AS	P4KE110CAS	94	105	116	1	1	1	152	2.8	P4KE110AS	P4KE110CAS
P4KE120AS	P4KE120CAS	102	114	126	1	1	1	165	2.5	P4KE120AS	P4KE120CAS
P4KE130AS	P4KE130CAS	111	124	137	1	1	1	179	2.3	P4KE130AS	P4KE130CAS
P4KE150AS	P4KE150CAS	128	143	158	1	1	1	207	2	P4KE150AS	P4KE150CAS
P4KE160AS	P4KE160CAS	136	152	168	1	1	1	219	1.9	P4KE160AS	P4KE160CAS



## P4KE10AS ~ P4KE250CAS Series

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

Part Number		VRWM	VBR			IR @VRWM		VC@IPP		Marking Code	
			Min.	Max.	IT	uA					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
400W Transient Voltage Suppressor											
P4KE170AS	P4KE170CAS	145	162	179	1	1	1	234	1.8	P4KE170AS	P4KE170CAS
P4KE180AS	P4KE180CAS	154	171	189	1	1	1	246	1.7	P4KE180AS	P4KE180CAS
P4KE200AS	P4KE200CAS	171	190	210	1	1	1	274	1.5	P4KE200AS	P4KE200CAS
P4KE220AS	P4KE220CAS	185	209	231	1	1	1	328	1.2	P4KE220AS	P4KE220CAS
P4KE250AS	P4KE250CAS	214	237	263	1	1	1	344	1.2	P4KE250AS	P4KE250CAS

**Notes :**

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.2
2. Mounted on 100cm<sup>2</sup> copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, standard footprint



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## TYPICAL CHARACTERISTIC CURVES

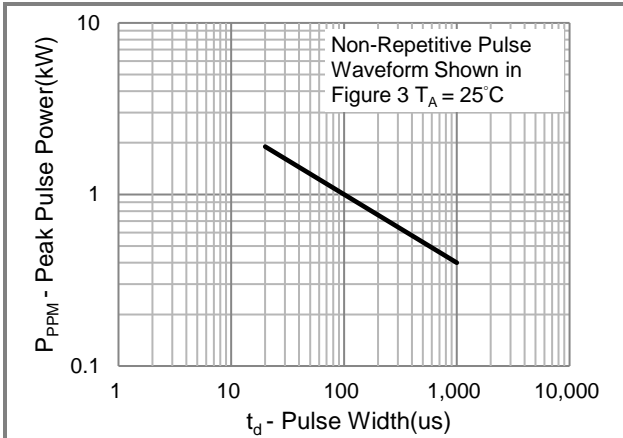


Fig.1 Pulse Power Rating Curve



Fig.2 Derating Curve



Fig.3 10/1000us Pulse Waveform

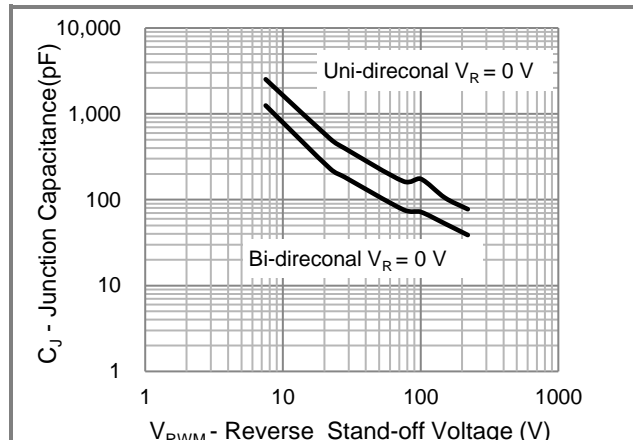


Fig.4 Typical Capacitance



## P4KE10AS ~ P4KE250CAS Series

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
P4KExxxxAS_AY_00001	DO-41	5K pcs / Ammo	See Table	Halogen free RoHS compliant

### Packaging Information





## **P4KE10AS ~ P4KE250CAS Series**

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