

400W Transient Voltage Suppressors


TVS Diodes - 400W > P4KE Series



Description

The P4KE series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

Features

- For surface mounted applications in order to optimize board space
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has UL flammability classification 94V-0
- Typical IR less than 1uA above 12V
- Fast response time: typically less than 1.0ps from 0 Volts to VBR min
- Glass passivated junction
- Low inductance
- Agency recognition: 



Package: DO-204AL / DO-41

Applications

- I/O interface
- AC/DC power supply
- Low frequency signal transmission line (RS232, RS485, etc.)

Electrical Characteristics

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation at TA=25°C by 10x1000µs waveform (Fig.1)(Note 1), (Note 2)	PPPM	400	W
Power Dissipation on infinite heat sink at TA=50°C	PM(AV)	1.5	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 3)	IFSM	40	A
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to 175	°C

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above TA=25°C per Fig. 2.
2. Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only.
3. $V_F < 3.5V$ for $V_{BR} \leq 200V$ and $V_F < 6.5V$ for $V_{BR} \geq 201V$.

Electrical Characteristics (TA=25°C)

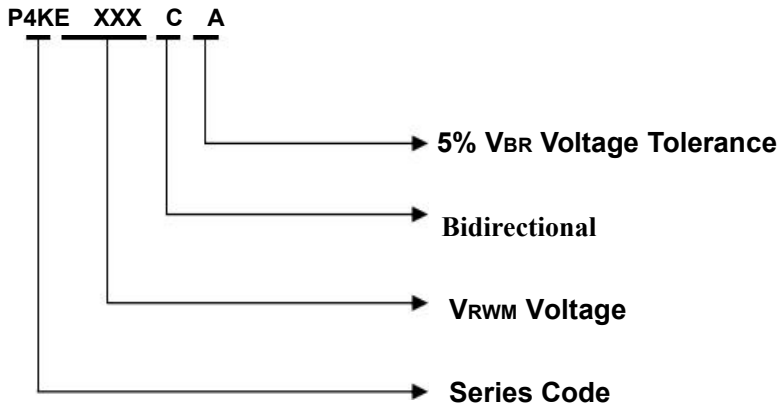
Part Number		Reverse Stand-Off Voltage	Breakdown Voltage $V_{BR}(\text{Volts})@I_T$		Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}	Safety Certification	Delivery Time
Uni-Polar	Bi-polar	V _{RWM} (V)	Min	Max	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)	UL	days
P4KE6.8A	P4KE6.8CA	5.80	6.45	7.14	10	10.5	39.0	1000	√	12days
P4KE7.5A	P4KE7.5CA	6.40	7.13	7.88	10	11.3	36.3	500	√	12days
P4KE8.2A	P4KE8.2CA	7.02	7.79	8.61	10	12.1	33.9	200	√	12days
P4KE9.1A	P4KE9.1CA	7.78	8.65	9.55	10	13.4	30.6	50	√	12days
P4KE10A	P4KE10CA	8.55	9.50	10.5	1	14.5	28.3	1	√	12days
P4KE11A	P4KE11CA	9.40	10.5	11.6	1	15.6	26.3	1	√	12days
P4KE12A	P4KE12CA	10.2	11.4	12.6	1	16.7	24.6	1	√	12days
P4KE13A	P4KE13CA	11.1	12.4	13.7	1	18.2	22.5	1	√	12days
P4KE15A	P4KE15CA	12.8	14.3	15.8	1	21.2	19.3	1	√	12days
P4KE16A	P4KE16CA	13.6	15.2	16.8	1	22.5	18.2	1	√	12days
P4KE18A	P4KE18CA	15.3	17.1	18.9	1	25.2	16.1	1	√	12days
P4KE20A	P4KE20CA	17.1	19.0	21.0	1	27.7	14.8	1	√	12days
P4KE22A	P4KE22CA	18.8	20.9	23.1	1	30.6	13.4	1	√	12days
P4KE24A	P4KE24CA	20.5	22.8	25.2	1	33.2	12.3	1	√	12days
P4KE27A	P4KE27CA	23.1	25.7	28.4	1	37.5	10.9	1	√	12days
P4KE30A	P4KE30CA	25.6	28.5	31.5	1	41.4	9.9	1	√	12days
P4KE33A	P4KE33CA	28.2	31.4	34.7	1	45.7	9.0	1	√	12days
P4KE36A	P4KE36CA	30.8	34.2	37.8	1	49.9	8.2	1	√	12days
P4KE39A	P4KE39CA	33.3	37.1	41.0	1	53.9	7.6	1	√	12days
P4KE43A	P4KE43CA	36.8	40.9	45.2	1	59.3	6.9	1	√	12days
P4KE47A	P4KE47CA	40.2	44.7	49.4	1	64.8	6.3	1	√	12days
P4KE51A	P4KE51CA	43.6	48.5	53.6	1	70.1	5.8	1	√	12days
P4KE56A	P4KE56CA	47.8	53.2	58.8	1	77.0	5.3	1	√	12days
P4KE62A	P4KE62CA	53.0	58.9	65.1	1	85.0	4.8	1	√	12days

Electrical Characteristics (TA=25°C) continued

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage V _{BR} (Volts)@I _T		Test Current	Maximum Clamping Voltage@I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}	Certification	Delivery Time
Uni-Polar	Bi-polar	V _{RWM} (V)	Min	Max	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (μA)	UL	days
P4KE68A	P4KE68CA	58.1	64.6	71.4	1	92.0	4.5	1	√	12days
P4KE75A	P4KE75CA	64.1	71.3	78.8	1	103.0	4.0	1	√	12days
P4KE82A	P4KE82CA	70.1	77.9	86.1	1	113.0	3.6	1	√	12days
P4KE91A	P4KE91CA	77.8	86.5	95.5	1	125.0	3.3	1	√	12days
P4KE100A	P4KE100CA	85.5	95.0	105	1	137.0	3.0	1	√	12days
P4KE110A	P4KE110CA	94.0	105	116	1	152.0	2.7	1	√	12days
P4KE120A	P4KE120CA	102.0	114	126	1	165.0	2.5	1	√	12days
P4KE130A	P4KE130CA	111.0	124	137	1	179.0	2.3	1	√	12days
P4KE150A	P4KE150CA	128.0	143	158	1	207.0	2.0	1	√	12days
P4KE160A	P4KE160CA	136.0	152	168	1	219.0	1.9	1	√	12days
P4KE170A	P4KE170CA	145.0	162	179	1	234.0	1.8	1	√	12days
P4KE180A	P4KE180CA	154.0	171	189	1	246.0	1.7	1	√	12days
P4KE200A	P4KE200CA	171.0	190	210	1	274.0	1.5	1	√	12days
P4KE220A	P4KE220CA	185.0	209	231	1	328.0	1.3	1	√	12days
P4KE250A	P4KE250CA	214.0	237	263	1	344.0	1.2	1	√	12days
P4KE300A	P4KE300CA	256.0	285	315	1	414.0	1.0	1	√	12days
P4KE350A	P4KE350CA	300.0	332	368	1	482.0	0.85	1	√	12days
P4KE400A	P4KE400CA	342.0	380	420	1	548.0	0.75	1	√	12days
P4KE440A	P4KE440CA	376.0	418	462	1	602.0	0.68	1	√	12days
P4KE480A	P4KE480CA	408.0	456	504	1	658.0	0.61	1	√	12days
P4KE510A	P4KE510CA	434.0	485	535	1	698.0	0.57	1	√	12days
P4KE540A	P4KE540CA	459.0	513	567	1	740.0	0.54	1	√	12days
P4KE550A	P4KE550CA	467.0	522.5	577	1	760.0	0.52	1	√	12days

Notes: For bidirectional type having V_{RWM} of 10 volts and less, the I_R limit is double.

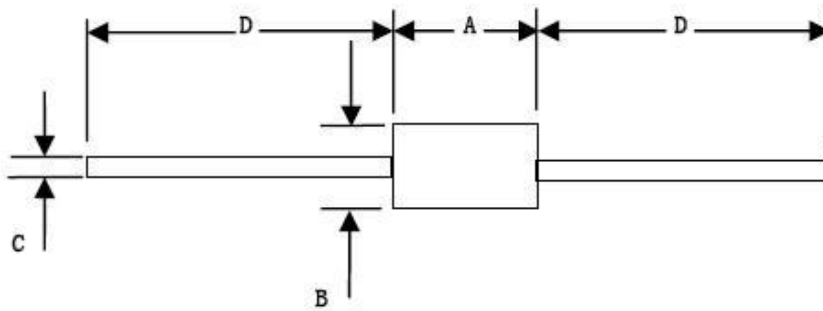
Description of Part Number



Packing Options

Package	Description	Packing Quantity	Industry Standard
DO-41	Tape and Reel Pack	2000 PCS	EIA STD RS-296E

Dimensions - DO-204AL / DO-41



Dimension	Inches		Millimeters		Note
	Min	Max	Min	Max	
A	0.16	0.205	4.1	5.2	
B	0.08	0.107	2.0	2.7	Φ
C	0.028	0.034	0.71	0.86	Φ
D	1.000		25.4		