

600W Transient Voltage Suppressors


TVS Diodes - 600W > P6KE Series



Description

The P6KE 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-O
- 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-204AC / DO-15

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	600	W
Power Dissipation on infinite heat sink at TA=50°C	PM(AV)	5	W
Peak Forward Surge Current, 8.3ms Single Half Sine Wave (Note 3)	IFSM	100	A
Maximum Instantaneous Forward Voltage at 25A for Unidirectional only (Note 4)	VF	3.5/5	V
Operating Junction and Storage Temperature Range	TJ, TSTG	-65 to 150	°C
Typical Thermal Resistance Junction to Lead	RθJL	20	°C/W
Typical Thermal Resistance Junction to Ambient	RθJA	75	°C/W

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 $V_{BR} \geq 201V$.

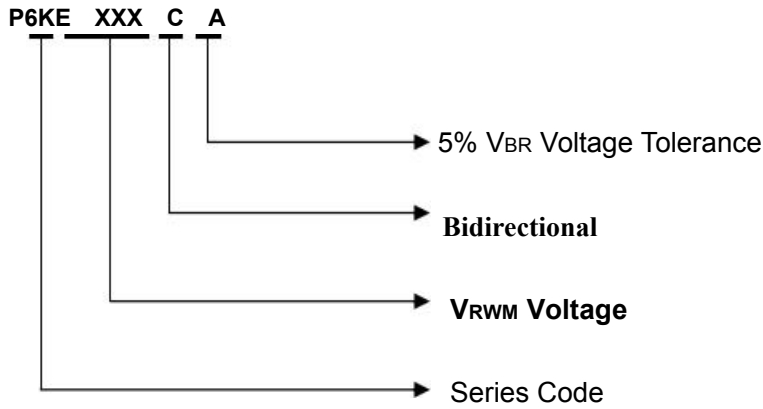
Electrical Characteristics (TA=25°C)

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage		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
P6KE6.8A	P6KE6.8CA	5.80	6.45	7.14	10	10.5	58.1	150	√	7days
P6KE7.5A	P6KE7.5CA	6.40	7.13	7.88	10	11.3	54.0	100	√	7days
P6KE8.2A	P6KE8.2CA	7.02	7.79	8.61	10	12.1	50.4	50	√	7days
P6KE9.1A	P6KE9.1CA	7.78	8.65	9.55	1	13.4	45.5	20	√	7days
P6KE10A	P6KE10CA	8.55	9.50	10.5	1	14.5	42.1	10	√	7days
P6KE11A	P6KE11CA	9.40	10.5	11.6	1	15.6	39.1	5	√	7days
P6KE12A	P6KE12CA	10.2	11.4	12.6	1	16.7	36.5	2	√	7days
P6KE13A	P6KE13CA	11.1	12.4	13.7	1	18.2	33.5	1	√	7days
P6KE15A	P6KE15CA	12.8	14.3	15.8	1	21.2	28.8	1	√	7days
P6KE16A	P6KE16CA	13.6	15.2	16.8	1	22.5	27.1	1	√	7days
P6KE18A	P6KE18CA	15.3	17.1	18.9	1	25.2	24.2	1	√	7days
P6KE20A	P6KE20CA	17.1	19.0	21.0	1	27.7	22.0	1	√	7days
P6KE22A	P6KE22CA	18.8	20.9	23.1	1	30.6	19.9	1	√	7days
P6KE24A	P6KE24CA	20.5	22.8	25.2	1	33.2	18.4	1	√	7days
P6KE27A	P6KE27CA	23.1	25.7	28.4	1	37.5	16.3	1	√	7days
P6KE30A	P6KE30CA	25.6	28.5	31.5	1	41.4	14.7	1	√	7days
P6KE33A	P6KE33CA	28.2	31.4	34.7	1	45.7	13.3	1	√	7days
P6KE36A	P6KE36CA	30.8	34.2	37.8	1	49.9	12.2	1	√	7days
P6KE39A	P6KE39CA	33.3	37.1	41.0	1	53.9	11.3	1	√	7days
P6KE43A	P6KE43CA	36.8	40.9	45.2	1	59.3	10.3	1	√	7days
P6KE47A	P6KE47CA	40.2	44.7	49.4	1	64.8	9.4	1	√	7days
P6KE51A	P6KE51CA	43.6	48.5	53.6	1	70.1	8.7	1	√	7days
P6KE56A	P6KE56CA	47.8	53.2	58.8	1	77.0	7.9	1	√	7days
P6KE62A	P6KE62CA	53.0	58.9	65.1	1	85.0	7.2	1	√	7days

Electrical Characteristics (TA=25°C) continued

Part Number		Reverse Stand-Off Voltage	Breakdown Voltage V _{BR} (Volts)@IT		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
P6KE68A	P6KE68CA	58.1	64.6	71.4	1	92.0	6.6	1	√	7days
P6KE75A	P6KE75CA	64.1	71.3	78.8	1	103.0	5.9	1	√	7days
P6KE82A	P6KE82CA	70.1	77.9	86.1	1	113.0	5.4	1	√	7days
P6KE91A	P6KE91CA	77.8	86.5	95.5	1	125.0	4.9	1	√	7days
P6KE100A	P6KE100CA	85.5	95.0	105	1	137.0	4.5	1	√	7days
P6KE110A	P6KE110CA	94.0	105	116	1	152.0	4.0	1	√	7days
P6KE120A	P6KE120CA	102.0	114	126	1	165.0	3.7	1	√	7days
P6KE130A	P6KE130CA	111.0	124	137	1	179.0	3.4	1	√	7days
P6KE150A	P6KE150CA	128.0	143	158	1	207.0	2.9	1	√	7days
P6KE160A	P6KE160CA	136.0	152	168	1	219.0	2.8	1	√	7days
P6KE170A	P6KE170CA	145.0	162	179	1	234.0	2.6	1	√	7days
P6KE180A	P6KE180CA	154.0	171	189	1	246.0	2.5	1	√	7days
P6KE200A	P6KE200CA	171.0	190	210	1	274.0	2.2	1	√	7days
P6KE220A	P6KE220CA	185.0	209	231	1	328.0	1.9	1	√	7days
P6KE250A	P6KE250CA	214.0	237	263	1	344.0	1.8	1	√	7days
P6KE300A	P6KE300CA	256.0	285	315	1	414.0	1.5	1	√	7days
P6KE350A	P6KE350CA	300.0	332	368	1	482.0	1.3	1	√	7days
P6KE400A	P6KE400CA	342.0	380	420	1	548.0	1.1	1	√	7days
P6KE440A	P6KE440CA	376.0	418	462	1	602.0	1.0	1	√	7days
P6KE480A	P6KE480CA	408.0	456	504	1	658.0	0.9	1	√	7days
P6KE510A	P6KE510CA	434.0	485	535	1	698.0	0.9	1	√	7days
P6KE540A	P6KE540CA	486.0	513	567	1	740.0	0.8	1	√	7days
P6KE550A	P6KE550CA	495.0	522.5	577	1	760.0	0.8	1	√	7days
P6KE600A	P6KE600CA	512.0	570	630	1	828.0	0.75	1	√	7days

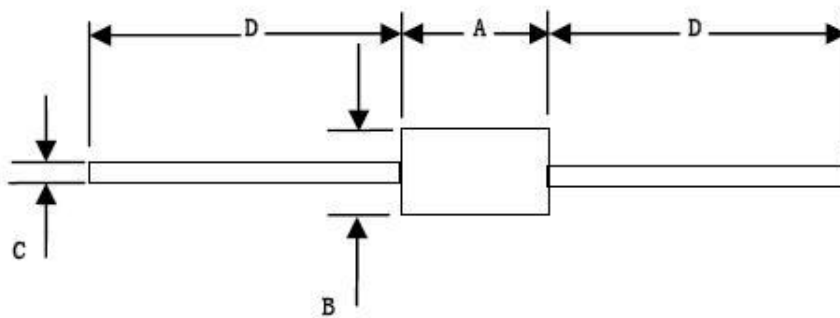
Description of Part Number



Packing Options

Package	Description	Packing Quantity	Industry Standard
DO-15	Tape and Reel Pack	2000 PCS	EIA STD RS-296E

Dimensions - DO-204AC / DO-15



Dimension	Inches		Millimeters		Note
	Min	Max	Min	Max	
A	0.230	0.300	5.80	7.60	
B	0.104	0.140	2.60	3.60	Φ
C	0.026	0.034	0.70	0.90	Φ
D	1.000		25.4		