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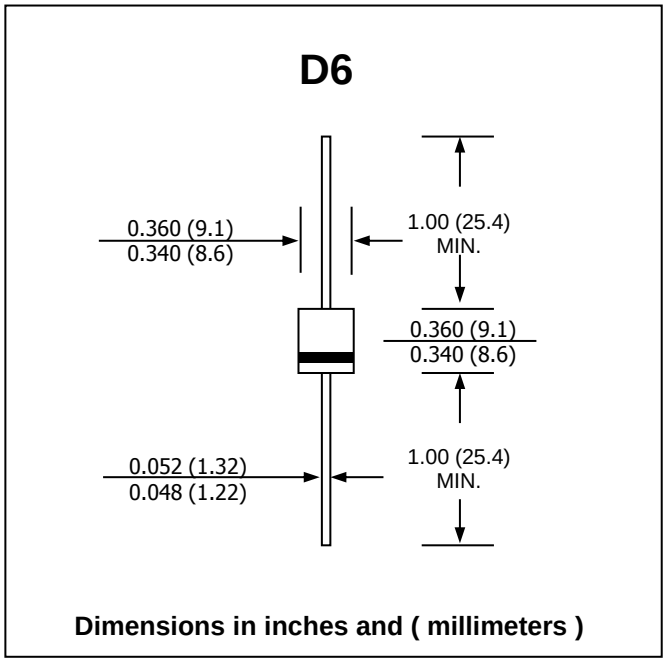
15KP SERIES

TRANSIENT VOLTAGE SUPPRESSORS

V_R : 12 - 400Volts

P_{PK} : 15,000 Watts



Dimensions in inches and (millimeters)

FEATURES :

* Glass passivated junction chip
* Excellent Clamping Capability
* Fast Response Time
* Low Zener Impedance
* Low Leakage Current
* Fast Response Time : typically less than 1.0ps from 0 volt to BV, Bidirectional less than 10ns
* High temperature soldering guaranteed : 265°C/10 second 0.375",(9.5mm) lead leagth.
* AEC-Q101 qualified
* Pb / RoHS Free

MECHANICAL DATA

* Case : Void-free molded plastic body
* Epoxy : UL94V-0 rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 2.1 grams

MAXIMUM RATINGS (Ta = 25°C)

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation (10X1000μs, see Fig.1)	P_{PK}	15,000	W
Steady State Power Dissipation	P_D	7.0	W
Operating and Storage Temperature Range	T_J, T_{STG}	- 55 to + 175	°C

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Part Number (Uni-directional)	Reverse Stand Off Voltage	Breakdown Voltage @ I_T			Maximum Reverse Leakage @ V_R	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current	Max. Voltage Temperature Variation of V_{BR}
	V_{WM}	V_{BR} (V)		I_T	I_R	V_C	I_{PP}	
	(V)	Min.	Max.	(mA)	(μA)	(V)	(A)	(mV/°C)
15KP12	12	13.3	16.3	50	10,000	22.0	658	12
15KP12A	12	13.3	14.7	50	10,000	19.9	725	12
15KP13	13	14.4	17.6	50	10,000	23.8	607	13
15KP13A	13	14.4	15.9	50	10,000	21.5	669	13
15KP14	14	15.6	19.1	50	8,000	25.8	564	14
15KP14A	14	15.6	17.2	50	8,000	23.2	622	14
15KP15	15	16.7	20.4	50	8,000	26.9	526	16
15KP15A	15	16.7	18.5	50	8,000	24.4	580	16
15KP16	16	17.8	21.8	50	8,000	28.8	493	19
15KP16A	16	17.8	19.7	50	8,000	26.0	544	17
15KP17	17	18.9	23.1	50	5,000	32.2	464	19
15KP17A	17	18.9	20.9	50	5,000	29.3	512	17
15KP18	18	20.0	24.4	50	5,000	34.2	439	20
15KP18A	18	20.0	22.1	50	5,000	30.9	485	18
15KP20	20	22.2	27.1	20	1,500	37.9	396	24
15KP20A	20	22.2	24.5	20	1,500	34.3	437	21
15KP22	22	24.4	29.8	10	500	41.1	365	27
15KP22A	22	24.4	26.9	10	500	37.1	404	24
15KP24	24	26.7	32.6	5.0	150	45.0	333	30
15KP24A	24	26.7	29.5	5.0	150	40.7	369	27
15KP26	26	28.9	35.3	5.0	50	48.7	308	32
15KP26A	26	28.9	31.9	5.0	50	44.0	341	29
15KP28	28	31.1	38.0	5.0	25	52.4	286	35
15KP28A	28	31.1	34.4	5.0	25	47.5	316	31
15KP30	30	33.3	40.7	5.0	15	56.2	267	37
15KP30A	30	33.3	36.8	5.0	15	50.7	296	33
15KP33	33	36.7	44.9	5.0	10	60.6	248	42
15KP33A	33	36.7	40.6	5.0	10	54.8	274	38
15KP36	36	40.0	48.9	5.0	10	66.0	227	46
15KP36A	36	40.0	44.2	5.0	10	59.7	251	41
15KP40	40	44.4	54.3	5.0	10	72.8	206	51
15KP40A	40	44.4	49.1	5.0	10	65.8	228	46
15KP43	43	47.8	58.4	5.0	10	77.1	195	55
15KP43A	43	47.8	52.8	5.0	10	69.7	215	50
15KP45	45	50.0	61.1	5.0	10	80.7	186	57
15KP45A	45	50.0	55.3	5.0	10	73.0	205	52
15KP48	48	53.3	65.1	5.0	10	85.9	175	62
15KP48A	48	53.3	58.9	5.0	10	77.7	193	56
15KP51	51	56.7	69.3	5.0	10	91.5	164	66
15KP51A	51	56.7	62.7	5.0	10	82.5	181	60
15KP54	54	60.0	73.3	5.0	10	96.8	155	70
15KP54A	54	60.0	66.3	5.0	10	87.5	171	63

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Part Number (Uni-directional)	Reverse Stand Off Voltage	Breakdown Voltage @ I_T			Maximum Reverse Leakage @ V_R	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current	Max. Voltage Temperature Variation of V_{BR}
	V_{WM}	V_{BR} (V)		I_T	I_R	V_C	I_{PP}	
	(V)	Min.	Max.	(mA)	(μA)	(V)	(A)	(mV/°C)
15KP58	58	64.4	78.7	5.0	10	104	144	76
15KP58A	58	64.4	71.2	5.0	10	94	160	68
15KP60	60	66.7	81.5	5.0	10	107	140	78
15KP60A	60	66.7	73.7	5.0	10	97.3	154	70
15KP64	64	71.1	86.9	5.0	10	115	130	84
15KP64A	64	71.1	78.6	5.0	10	104	144	76
15KP70	70	77.8	95.1	5.0	10	126	119	92
15KP70A	70	77.8	86.0	5.0	10	114	132	83
15KP75	75	83.3	102	5.0	10	135	111	100
15KP75A	75	83.3	92.1	5.0	10	122	123	89
15KP78	78	86.7	106	5.0	10	140	107	104
15KP78A	78	86.7	95.8	5.0	10	126	119	93
15KP85	85	94.4	115	5.0	10	152	99	113
15KP85A	85	94.4	104	5.0	10	137	109	102
15KP90	90	100	122	5.0	10	160	94	120
15KP90A	90	100	111	5.0	10	146	103	110
15KP100	100	111	136	5.0	10	179	84	134
15KP100A	100	111	123	5.0	10	162	93	123
15KP110	110	122	149	5.0	10	196	77	147
15KP110A	110	122	135	5.0	10	178	84	133
15KP120	120	133	163	5.0	10	214	70	161
15KP120A	120	133	147	5.0	10	193	78	146
15KP130	130	144	176	5.0	10	231	65	174
15KP130A	130	144	159	5.0	10	209	72	158
15KP150	150	167	204	5.0	10	268	56	202
15KP150A	150	167	185	5.0	10	243	62	184
15KP160	160	178	218	5.0	10	287	52	216
15KP160A	160	178	197	5.0	10	259	58	196
15KP170	170	189	231	5.0	10	304	49	229
15KP170A	170	189	209	5.0	10	275	55	208
15KP180	180	200	244	5.0	10	321	47	242
15KP180A	180	200	221	5.0	10	287	52	220
15KP200	200	222	271	5.0	10	356	42	296
15KP200A	200	222	245	5.0	10	325	46	274
15KP220	220	245	299	5.0	10	393	38	297
15KP220A	220	245	271	5.0	10	347	43	273
15KP240	240	267	326	5.0	10	428	35	324
15KP240A	240	267	295	5.0	10	387	39	300
15KP260	260	289	353	5.0	10	464	32	352
15KP260A	260	289	319	5.0	10	419	36	317
15KP280	280	311	380	5.0	10	500	30	378
15KP280A	280	311	344	5.0	10	452	33	342

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Part Number (Uni-directional)	Reverse Stand Off Voltage	Breakdown Voltage @ I_T			Maximum Reverse Leakage @ V_R	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current	Max. Voltage Temperature Variation of V_{BR}
	V_{WM}	V_{BR} (V)		I_T	I_R	V_C	I_{PP}	
	(V)	Min.	Max.	(mA)	(μA)	(V)	(A)	(mV/°C)
15KP300	300	333	406	5.0	10	535	28	396
15KP300A	300	333	369	5.0	10	483	31	368
15KP320	320	356	434	5.0	10	588	26	398
15KP320A	320	356	392	5.0	10	530	29	370
15KP350	350	389	475	5.0	10	637	24	458
15KP350A	350	389	431	5.0	10	564	27	430
15KP360	360	400	488	5.0	10	635	24	408
15KP360A	360	400	436	5.0	10	567	27	380
15KP400	400	444	542	5.0	10	730	21	518
15KP400A	400	444	492	5.0	10	644	23	490

Note: (1) Suffix " A " denotes 5% tolerance device , no suffix denotes a 10% tolerance device.

RATING AND CHARACTERISTIC CURVES (15KP SERIES)

FIG.1 - PULSE WAVE FORM

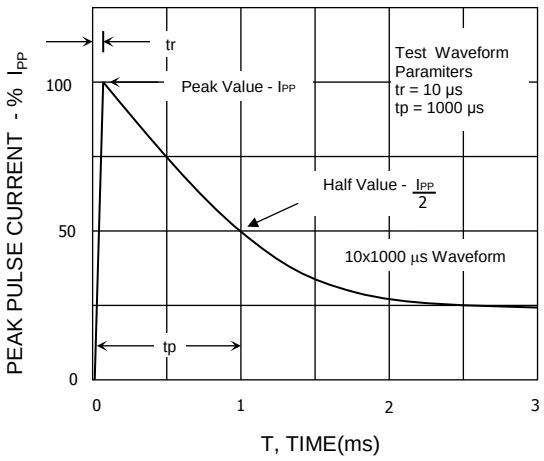


FIG.2 - PEAK PULSE POWER VS. PULSE TIME

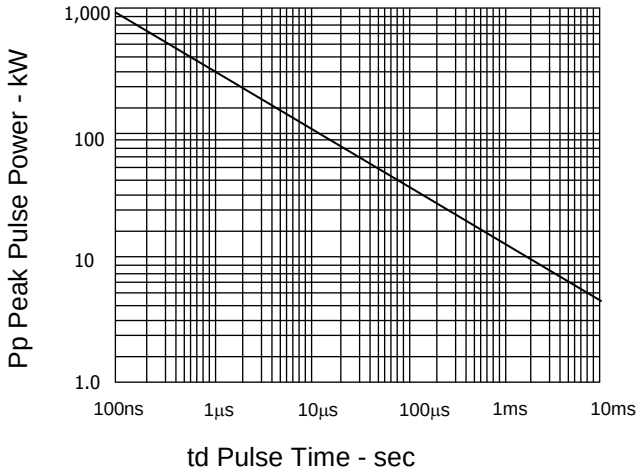


FIG.3 - TYPICAL CAPAITANCE VS. BREAKDOWN VOLTAGE

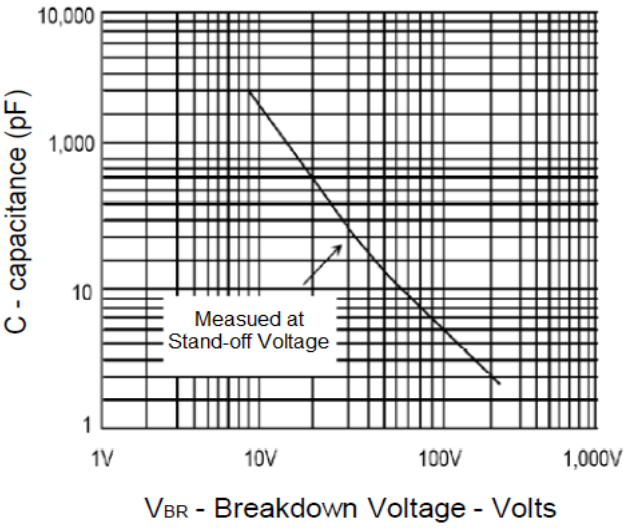


FIG.4 - PULSE DERATING CURVE