



5KP

TVS

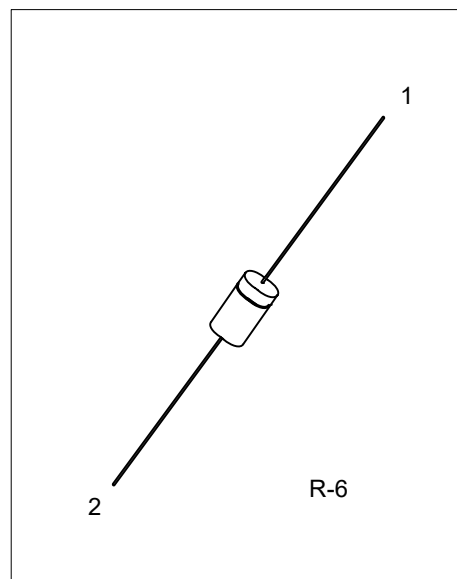
ESD PROTECTION DIODES / TVS DIODES TVS AXIAL HI-POWER

DESCRIPTION

The UTC **5KP** Series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.

FEATURES

- * 5000W surge capability at 1ms
- * Excellent clamping capability
- * Low zener impedance
- * Fast response time: typically less than 1.0 ps



SYMBOL

A (UNI)	CA (BI)

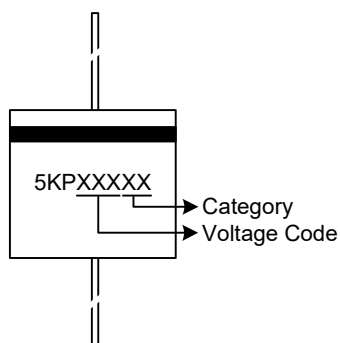
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
5KPL-R06-B	5KPG-R06-B	R-6	K	A	Tape Box

Note: Pin Assignment: K: Cathode A: Anode

	(1) B: Tape Box (2) R06: R-6 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Peak Power Dissipation (Note 2)	P _{PK}	5000	W
Peak Forward Surge Current at 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 3)	I _{FSM}	400	A
Operating Junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature	T _{STG}	-55 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise noted)

PART NUMBER (UNI)	PART NUMBER (BI)	BREAKDOWN VOLTAGE V _{BR} @ I _T			MAXIMUM REVERSE LEAKAGE I _R @ V _{RWM} (μA)	REVERSE STAND-OFF VOLTAGE V _{RWM} (V)	MAXIMUM PEAK PULSE CURRENT I _{PP} (A)	MAXIMUM CLAMPING VOLTAGE V _C @ I _{PP} (V)
		MIN (V)	MAX (V)	I _T (mA)				
5KP5.0A	5KP5.0CA	6.40	7.00	50	5000	5.0	554.3	9.2
5KP6.0A	5KP6.0CA	6.67	7.37	50	5000	6.0	495.1	10.3
5KP6.5A	5KP6.5CA	7.22	7.98	50	2000	6.5	455.4	11.2
5KP7.0A	5KP7.0CA	7.78	8.60	50	1000	7.0	425	12.0
5KP7.5A	5KP7.5CA	8.33	9.21	5	250	7.5	395.3	12.9
5KP8.0A	5KP8.0CA	8.89	9.83	5	150	8.0	375	13.6
5KP8.5A	5KP8.5CA	9.44	10.40	5	50	8.5	354.2	14.4
5KP9.0A	5KP9.0CA	10	11.1	5	20	9.0	331.2	15.4
5KP10A	5KP10CA	11	12.3	5	15	10	300.0	17.0
5KP11A	5KP11CA	12.2	13.5	5	5	11	280.2	18.2
5KP12A	5KP12CA	13.3	14.7	5	1	12	256.3	19.9
5KP13A	5KP13CA	14.4	15.9	5	1	13	237.2	21.5
5KP14A	5KP14CA	15.6	17.2	5	1	14	219.8	23.2
5KP15A	5KP15CA	16.7	18.5	5	1	15	209.0	24.4
5KP16A	5KP16CA	17.8	19.7	5	1	16	196.2	26.0
5KP17A	5KP17CA	18.9	20.9	5	1	17	184.8	27.6
5KP18A	5KP18CA	20	22.1	5	1	18	174.7	29.2
5KP20A	5KP20CA	22	24.5	5	1	20	157.4	32.4
5KP22A	5KP22CA	24	26.9	5	1	22	143.7	35.5
5KP24A	5KP24CA	26.7	29.5	5	1	24	131.1	38.9
5KP26A	5KP26CA	28.9	31.9	5	1	26	121.1	42.1
5KP28A	5KP28CA	31.1	34.4	5	1	28	112.3	45.4
5KP30A	5KP30CA	33.3	36.8	5	1	30	105.4	48.4
5KP33A	5KP33CA	36.7	40.6	5	1	33	95.7	53.3
5KP36A	5KP36CA	40	44.2	5	1	36	87.8	58.1
5KP40A	5KP40CA	44.4	49.1	5	1	40	79.1	64.5
5KP43A	5KP43CA	47.8	52.8	5	1	43	73.5	69.4
5KP45A	5KP45CA	50	55.3	5	1	45	70.2	72.7
5KP48A	5KP48CA	53.3	58.9	5	1	48	65.9	77.4
5KP51A	5KP51CA	56.7	62.7	5	1	51	61.9	82.4
5KP54A	5KP54CA	60	66.3	5	1	54	58.6	87.1
5KP58A	5KP58CA	64.4	71.2	5	1	58	54.5	93.6
5KP60A	5KP60CA	66.7	73.7	5	1	60	52.7	96.8
5KP64A	5KP64CA	71.1	78.6	5	1	64	49.5	103
5KP70A	5KP70CA	77.8	86.0	5	1	70	45.1	113
5KP75A	5KP75CA	83.3	92.1	5	1	75	42.1	121

■ ELECTRICAL CHARACTERISTICS (Cont.)

PART NUMBER (UNI)	PART NUMBER (BI)	BREAKDOWN VOLTAGE $V_{BR} @ I_T$			MAXIMUM REVERSE LEAKAGE $I_R @ V_{RWM}$ (μA)	REVERSE STAND-OFF VOLTAGE V_{RWM} (V)	MAXIMUM PEAK PULSE CURRENT I_{PP} (A)	MAXIMUM CLAMPING VOLTAGE $V_C @ I_{PP}$ (V)
		MIN (V)	MAX (V)	I_T (mA)				
5KP78A	5KP78CA	86.7	95.8	5	1	78	40.5	126
5KP85A	5KP85CA	94.4	104	5	1	85	37.2	137
5KP90A	5KP90CA	100	111	5	1	90	34.9	146
5KP100A	5KP100CA	111	123	5	1	100	31.5	162
5KP110A	5KP110CA	122	135	5	1	110	28.8	177
5KP120A	5KP120CA	133	147	5	1	120	26.4	193
5KP130A	5KP130CA	144	159	5	1	130	24.4	209
5KP150A	5KP150CA	167	185	5	1	150	21.0	243
5KP160A	5KP160CA	178	197	5	1	160	19.7	259
5KP170A	5KP170CA	189	209	5	1	170	18.5	275
5KP180A	5KP180CA	200	221	1	1	180	17.5	289
5KP190A	5KP190CA	211	233	1	1	190	16.5	310
5KP200A	5KP200CA	222	246	1	1	200	15.5	329.2
5KP210A	5KP210CA	233	258	1	1	210	14.6	349.5
5KP220A	5KP220CA	244	270	1	1	220	13.7	371.1
5KP250A	5KP250CA	244	306	1	1	250	12.0	425.0

■ TYPICAL CHARACTERISTICS

Fig 1. Peak Pulse Power Rating Versus Pulse Time Curve

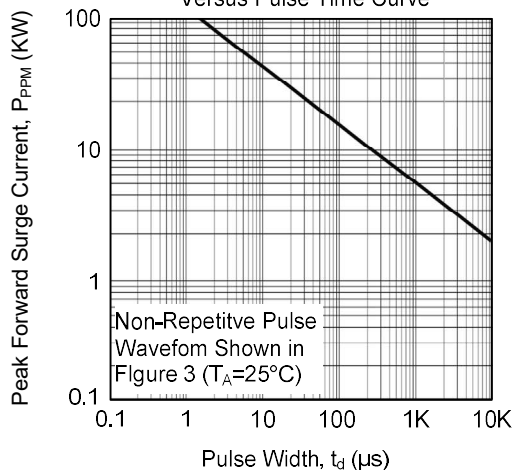


Fig 2. Pulse Derating Curve

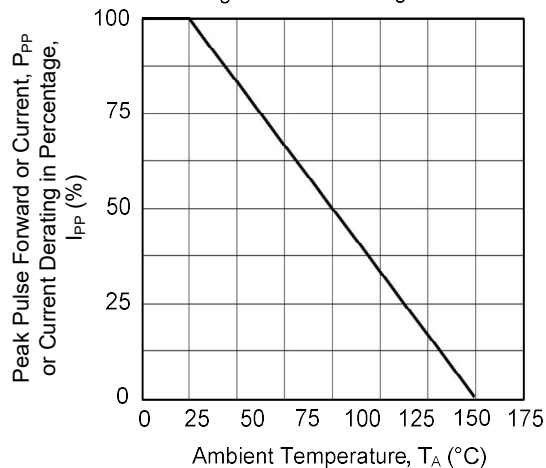


Fig 3. Pulse Waveform

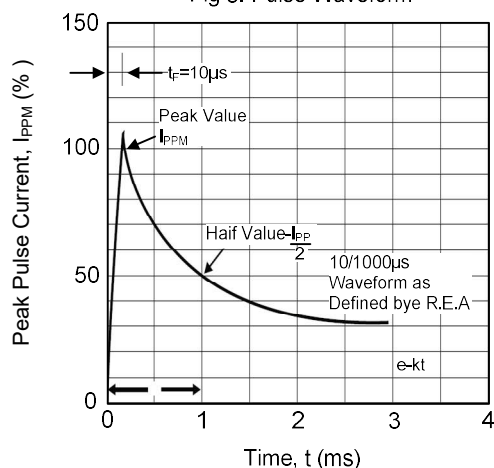


Fig 4. Typical Junction Capacitance

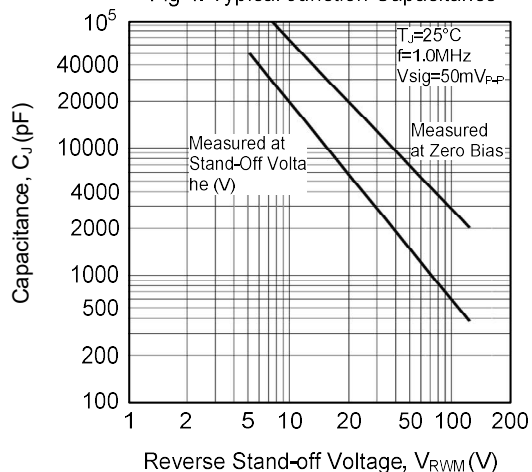
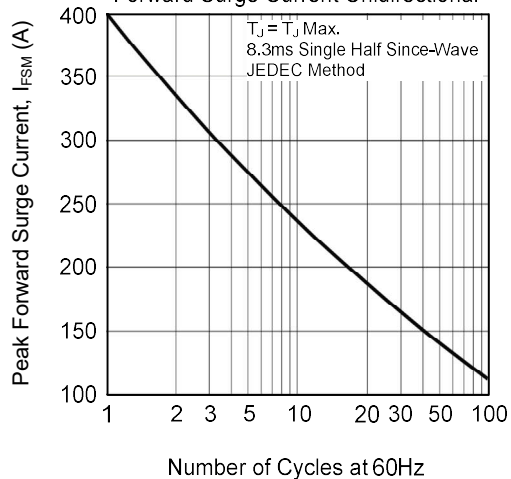


Fig 5. Maximum Non-Repetitive Peak Forward Surge Current Unidirectional



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