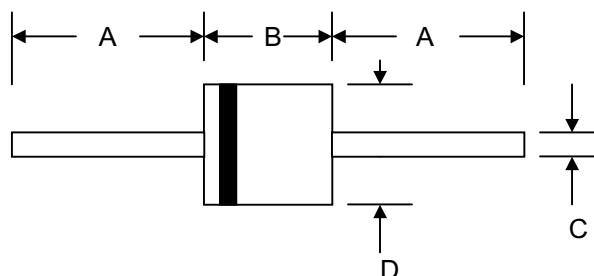


Data Sheet 1247 Rev. D

Features

- Glass Passivated Die Construction
- 3000W Peak Pulse Power Dissipation
- 5.0V – 170V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- UL Recognized File # E224235



Mechanical Data

- Case: JEDEC P-600 Molded Plastic
- Terminals: Axial Leads, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking:
Unidirectional – Device Code and Cathode Band
Bidirectional – Device Code Only
- Weight: 2.10 grams (approx.)

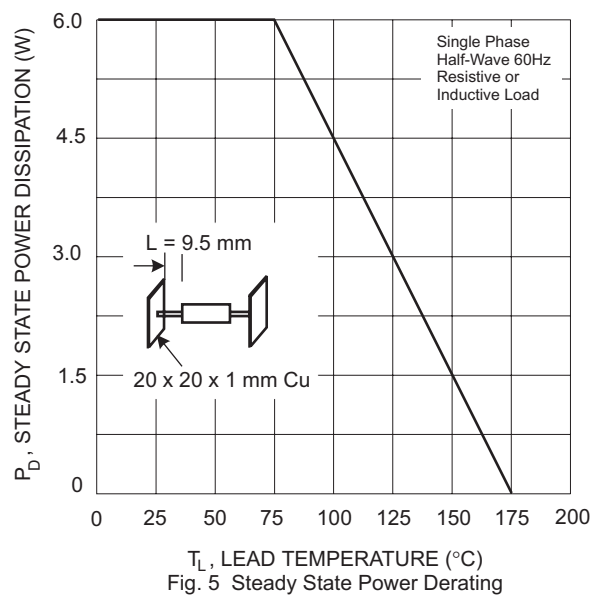
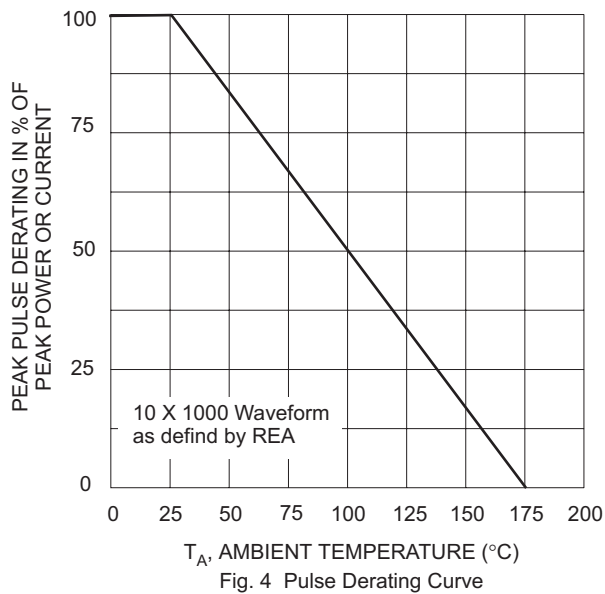
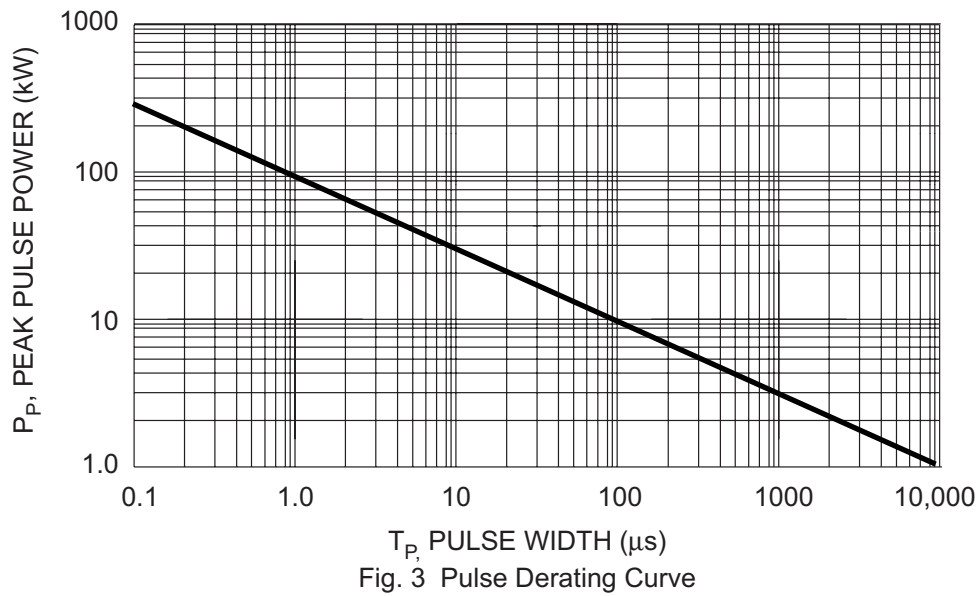
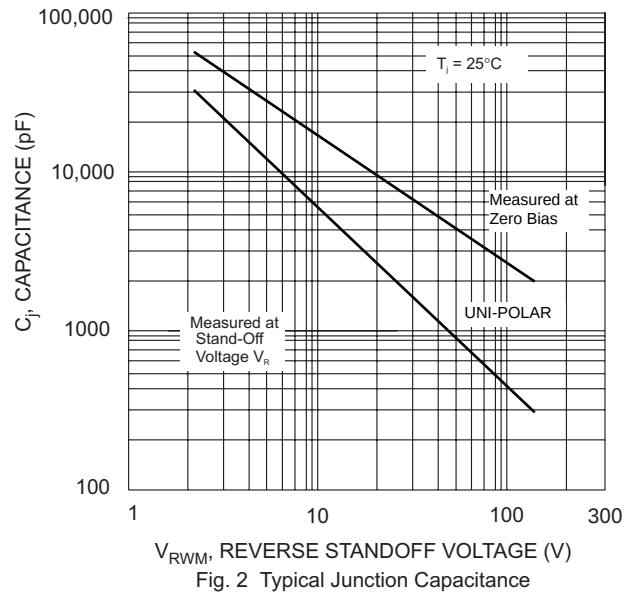
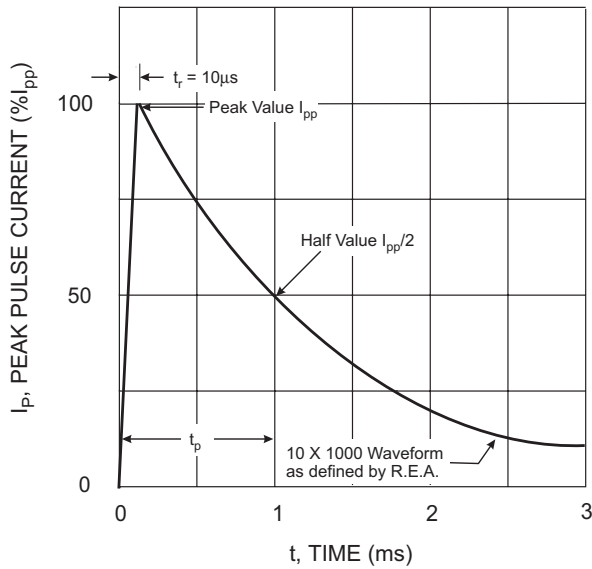
P-600				
Dim	Min	Max	Min	Max
A	25.4	—	1.000	—
B	8.60	9.10	0.339	0.358
C	1.20	1.30	0.047	0.051
D	8.60	9.10	0.339	0.358
	In ,mm		In inch	

“C” Suffix Designates Bi-directional Devices
 “A” Suffix Designates 5% Tolerance Devices
 No Suffix Designates 10% Tolerance Devices

Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Pulse Power Dissipation at $T_A = 25^{\circ}\text{C}$ (Note 1, 2, 5) Figure 1	PPPM	3000	W
Peak Forward Surge Current per Figure 6 (Note 3)	IFSM	250	A
Peak Pulse Current on 10/1000 μS Waveform (Note 1) Figure 3	I _{PPM}	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	P _{M(AV)}	8.0	W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +175	$^{\circ}\text{C}$

Note: 1. Non-repetitive current pulse, per Figure 3 and derated above $T_A = 25^{\circ}\text{C}$ per Figure 2
 2. Mounted on 20mm² copper pad
 3. 8.3ms single half sine-wave duty cycle = 4 pulses per minutes maximum
 4. Lead temperature at $75^{\circ}\text{C} = T_L$
 5. Peak pulse power waveform is 10/1000 μS



UNI-DIRECTIONAL 3000 WATT AXIAL LEAD TVS

UNI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @VRWM IR (uA)
3KP5.0	5	6.4	7.82	10	9.6	312.5	1000
3KP5.0A	5	6.4	7.07	10	9.2	326	1000
3KP6.0	6	6.67	8.15	10	11.4	263.2	1000
3KP6.0A	6	6.67	7.37	10	10.3	291.3	1000
3KP6.5	6.5	7.22	8.82	10	12.3	243.9	500
3KP6.5A	6.5	7.22	7.98	10	11.2	267.9	500
3KP7.0	7	7.78	9.51	10	13.3	225.6	200
3KP7.0A	7	7.78	8.60	10	12	250	200
3KP7.5	7.5	8.33	10.18	1	14.3	209.8	100
3KP7.5A	7.5	8.33	9.21	1	12.9	232.6	100
3KP8.0	8	8.99	10.99	1	15	220	50
3KP8.0A	8	8.99	9.94	1	13.6	220.6	50
3KP8.5	8.5	9.44	11.54	1	15.9	188.8	25
3KP8.5A	8.5	9.44	10.43	1	14.4	208.4	25
3KP9.0	9	10	12.22	1	16.9	177.4	10
3KP9.0A	9	10	11.05	1	15.4	194.8	10
3KP10	10	11.1	13.57	1	18.8	159.6	5
3KP10A	10	11.1	12.27	1	17	176.4	5
3KP11	11	12.2	14.91	1	20.1	149.2	5
3KP11A	11	12.2	13.48	1	18.2	184.8	5
3KP12	12	13.3	16.26	1	22	136.4	5
3KP12A	12	13.3	14.70	1	19.9	150.6	5
3KP13	13	14.4	17.60	1	23.8	126	5
3KP13A	13	14.4	15.92	1	21.5	139.4	5
3KP14	14	15.6	19.07	1	25.8	116.2	5
3KP14A	14	15.6	17.24	1	23.2	129.4	5
3KP15	15	16.7	20.41	1	26.9	111.6	5
3KP15A	15	16.7	18.46	1	24.4	123	5
3KP16	16	17.8	21.76	1	28.8	104.2	5
3KP16A	16	17.8	19.67	1	26	115.4	5
3KP17	17	18.9	23.10	1	30.5	98.4	5
3KP17A	17	18.9	20.89	1	27.6	106.6	5
3KP18	18	20	24.44	1	32.2	93.2	5
3KP18A	18	20	22.11	1	29.2	102.8	5
3KP20	20	22.2	27.13	1	35.8	83.8	5
3KP20A	20	22.2	24.54	1	32.4	92.6	5
3KP22	22	24.4	29.82	1	39.4	76.2	5
3KP22A	22	24.4	26.97	1	35.5	84.4	5
3KP24	24	26.7	32.63	1	43	69.8	5
3KP24A	24	26.7	29.51	1	38.9	77.2	5
3KP26	26	28.9	35.32	1	46.6	64.4	5
3KP26A	26	28.9	31.94	1	42.1	71.2	5
3KP28	28	31.1	38.01	1	50	60	5
3KP28A	28	31.1	34.37	1	45.4	66	5
3KP30	30	33.3	40.70	1	53.5	56	5
3KP30A	30	33.3	36.81	1	48.4	62	5
3KP33	33	36.7	44.86	1	59	50.4	5
3KP33A	33	36.7	40.56	1	53.3	56.2	5
3KP36	36	40	48.89	1	64.3	46.6	5
3KP36A	36	40	44.21	1	58.1	51.6	5
3KP40	40	44.4	54.27	1	71.4	42	5
3KP40A	40	44.4	49.07	1	64.5	46.4	5
3KP43	43	47.8	58.42	1	76.6	39.2	5
3KP43A	43	47.8	52.83	1	69.4	43.2	5
3KP45	45	50	61.11	1	80.3	37.4	5
3KP45A	45	50	55.26	1	72.7	41.2	5
3KP48	48	53.3	65.14	1	85.5	35	5
3KP48A	48	53.3	58.91	1	77.4	38.8	5
3KP51	51	56.7	69.30	1	91.1	37	5
3KP51A	51	56.7	62.67	1	82.4	36.4	5
3KP54	54	60	73.33	1	96.3	31.2	5
3KP54A	54	60	66.32	1	87.1	34.4	5
3KP58	58	64.4	78.71	1	103	29.2	5
3KP58A	58	64.4	78.71	1	93.6	32	5
3KP60	60	66.7	81.52	1	107	28	5
3KP60A	60	66.7	73.72	1	96.8	31	5
3KP64	64	71.1	86.90	1	114	26.4	5
3KP64A	64	71.1	86.90	1	103	29.2	5
3KP70	70	77.8	95.09	1	125	24	5
3KP70A	70	77.8	85.99	1	113	26.6	5
3KP75	75	83.3	101.81	1	134	22.4	5
3KP75A	75	83.3	101.81	1	121	24.8	5
3KP78	78	86.7	105.97	1	139	21.6	5
3KP78A	78	86.7	95.83	1	126	22.8	5
3KP85	85	94.4	115.38	1	151	19.8	5
3KP85A	85	94.4	115.38	1	137	20.8	5
3KP90	90	100	122.22	1	160	18.8	5
3KP90A	90	100	110.53	1	146	20.6	5
3KP100	100	111	135.67	1	179	16.6	5
3KP100A	100	111	135.67	1	162	18.6	5
3KP110	110	122	149.11	1	196	15.4	5
3KP110A	110	122	134.84	1	177	16.8	5
3KP120	120	133	162.56	1	214	14	5
3KP120A	120	133	147.00	1	193	15.6	5
3KP130	130	144	176.00	1	231	13	5
3KP130A	130	144	159.16	1	209	14.4	5
3KP150	150	167	204.11	1	269	11.2	5
3KP150A	150	167	184.58	1	243	12.4	5
3KP160	160	178	217.56	1	287	10.4	5
3KP160A	160	178	196.74	1	259	11.6	5
3KP170	170	189	231.00	1	304	9.8	5
3KP170A	170	189	208.99	1	275	11	5

BI-DIRECTIONAL 3000 WATT AXIAL LEAD TVS

BI-DIRECTIONAL PART NUMBER	REVERSE STAND-OFF VOLTAGE VRWM	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @VRWM IR
3KP5.0C	5	6.4	7.82	10	9.6	312.5	2000
3KP5.0CA	5	6.4	7.07	10	9.2	326	2000
3KP6.0C	6	6.67	8.15	10	11.4	263.2	2000
3KP6.0CA	6	6.67	7.37	10	10.3	291.3	2000
3KP6.5C	6.5	7.22	8.82	10	12.3	243.9	1000
3KP6.5CA	6.5	7.22	7.98	10	11.2	267.9	1000
3KP7.0C	7	7.78	9.51	10	13.3	225.6	400
3KP7.0CA	7	7.78	8.60	10	12	250	400
3KP7.5C	7.5	8.33	10.18	1	14.3	209.8	200
3KP7.5CA	7.5	8.33	9.21	1	12.9	232.6	200
3KP8.0C	8	8.99	10.99	1	15	220	100
3KP8.0CA	8	8.99	9.94	1	13.6	220.6	100
3KP8.5C	8.5	9.44	11.54	1	15.9	188.8	50
3KP8.5CA	8.5	9.44	10.43	1	14.4	208.4	50
3KP9.0C	9	10	12.22	1	16.9	177.4	20
3KP9.0CA	9	10	11.05	1	15.4	194.8	20
3KP10C	10	11.1	13.57	1	18.8	159.6	5
3KP10CA	10	11.1	12.27	1	17	176.4	5
3KP11C	11	12.2	14.91	1	20.1	149.2	5
3KP11CA	11	12.2	13.48	1	18.2	184.8	5
3KP12C	12	13.3	16.26	1	22	136.4	5
3KP12CA	12	13.3	14.70	1	19.9	150.6	5
3KP13C	13	14.4	17.60	1	23.8	126	5
3KP13CA	13	14.4	15.92	1	21.5	139.4	5
3KP14C	14	15.6	19.07	1	25.8	116.2	5
3KP14CA	14	15.6	17.24	1	23.2	129.4	5
3KP15C	15	16.7	20.41	1	26.9	111.6	5
3KP15CA	15	16.7	18.46	1	24.4	123	5
3KP16C	16	17.8	21.76	1	28.8	104.2	5
3KP16CA	16	17.8	19.67	1	26	115.4	5
3KP17C	17	18.9	23.10	1	30.5	98.4	5
3KP17CA	17	18.9	20.89	1	27.6	106.6	5
3KP18C	18	20	24.44	1	32.2	93.2	5
3KP18CA	18	20	22.11	1	29.2	102.8	5
3KP20C	20	22.2	27.13	1	35.8	83.8	5
3KP20CA	20	22.2	24.54	1	32.4	92.6	5
3KP22C	22	24.4	29.82	1	39.4	76.2	5
3KP22CA	22	24.4	26.97	1	35.5	84.4	5
3KP24C	24	26.7	32.63	1	43	69.8	5
3KP24CA	24	26.7	29.51	1	38.9	77.2	5
3KP26C	26	28.9	35.32	1	46.6	64.4	5
3KP26CA	26	28.9	31.94	1	42.1	71.2	5
3KP28C	28	31.1	38.01	1	50	60	5
3KP28CA	28	31.1	34.37	1	45.4	66	5
3KP30C	30	33.3	40.70	1	53.5	56	5
3KP30CA	30	33.3	36.81	1	48.4	62	5
3KP33C	33	36.7	44.86	1	59	50.4	5
3KP33CA	33	36.7	40.56	1	53.3	56.2	5
3KP36C	36	40	48.89	1	64.3	46.6	5
3KP36CA	36	40	44.21	1	58.1	51.6	5
3KP40C	40	44.4	54.27	1	71.4	42	5
3KP40CA	40	44.4	49.07	1	64.5	46.4	5
3KP43C	43	47.8	58.42	1	76.6	39.2	5
3KP43CA	43	47.8	52.83	1	69.4	43.2	5
3KP45C	45	50	61.11	1	80.3	37.4	5
3KP45CA	45	50	55.26	1	72.7	41.2	5
3KP48C	48	53.3	65.14	1	85.5	35	5
3KP48CA	48	53.3	58.91	1	77.4	38.8	5
3KP51C	51	56.7	69.30	1	91.1	37	5
3KP51CA	51	56.7	62.67	1	82.4	36.4	5
3KP54C	54	60	73.33	1	96.3	31.2	5
3KP54CA	54	60	66.32	1	87.1	34.4	5
3KP58C	58	64.4	78.71	1	103	29.2	5
3KP58CA	58	64.4	71.18	1	93.6	32	5
3KP60C	60	66.7	81.52	1	107	28	5
3KP60CA	60	66.7	73.72	1	96.8	31	5
3KP64C	64	71.1	86.90	1	114	26.4	5
3KP64CA	64	71.1	78.58	1	103	29.2	5
3KP70C	70	77.8	95.09	1	125	24	5
3KP70CA	70	77.8	85.99	1	113	26.6	5
3KP75C	75	83.3	101.81	1	134	22.4	5
3KP75CA	75	83.3	92.07	1	121	24.8	5
3KP78C	78	86.7	105.97	1	139	21.6	5
3KP78CA	78	86.7	95.83	1	126	22.8	5
3KP85C	85	94.4	115.38	1	151	19.8	5
3KP85CA	85	94.4	104.34	1	137	20.8	5
3KP90C	90	100	122.22	1	160	18.8	5
3KP90CA	90	100	110.53	1	146	20.6	5
3KP100C	100	111	135.67	1	179	16.6	5
3KP100CA	100	111	122.68	1	162	18.6	5
3KP110C	110	122	149.11	1	196	15.4	5
3KP110CA	110	122	134.84	1	177	16.8	5
3KP120C	120	133	162.56	1	214	14	5
3KP120CA	120	133	147.00	1	193	15.6	5
3KP130C	130	144	176.00	1	231	13	5
3KP130CA	130	144	159.16	1	209	14.4	5
3KP150C	150	167	204.11	1	269	11.2	5
3KP150CA	150	167	184.58	1	243	12.4	5
3KP160C	160	178	217.56	1	287	10.4	5
3KP160CA	160	178	196.74	1	259	11.6	5
3KP170C	170	189	231.00	1	304	9.8	5
3KP170CA	170	189	208.89	1	275	11	5

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