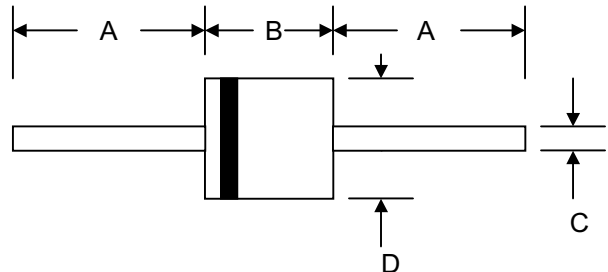


Data Sheet 5007, Rev. -

Green Products

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
- Green Products in Compliance with the RoHS Directive



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
A	0.001(25.4)	—
B	0.339(8.60)	0.358(9.10)
C	0.047(1.20)	0.051(1.30)
D	0.339(8.60)	0.358(9.10)
All Dimensions in inch(mm)		

“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 Minimum	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	IPPM	See Table 1	A
Steady State Power Dissipation (Note 2, 4)	PM(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

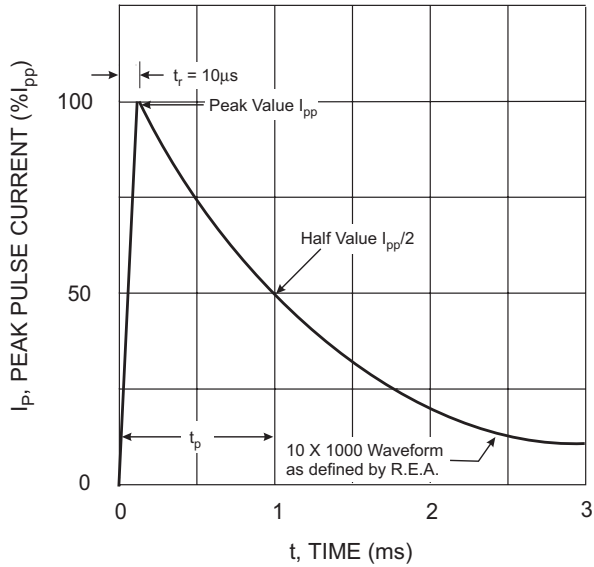


Fig. 1 Pulse Waveform

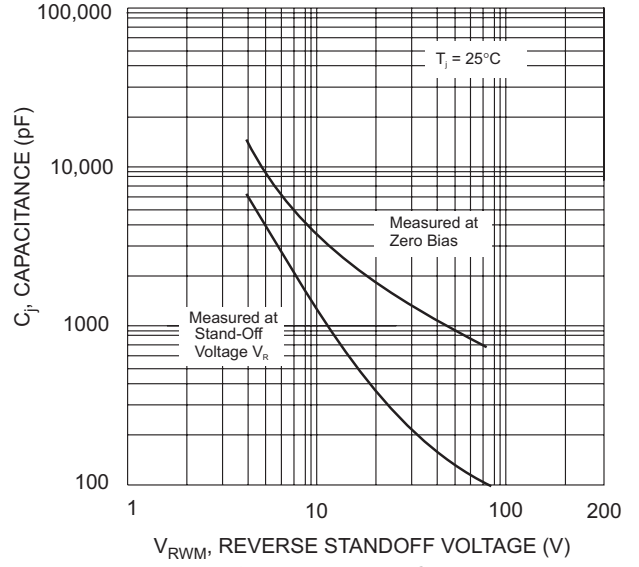


Fig. 2 Typical Junction Capacitance

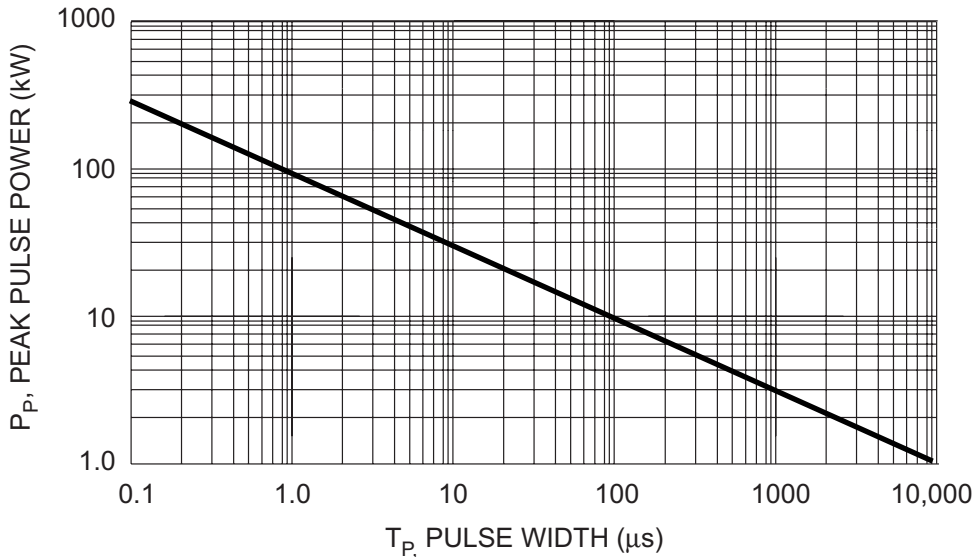


Fig. 3 Pulse Derating Curve

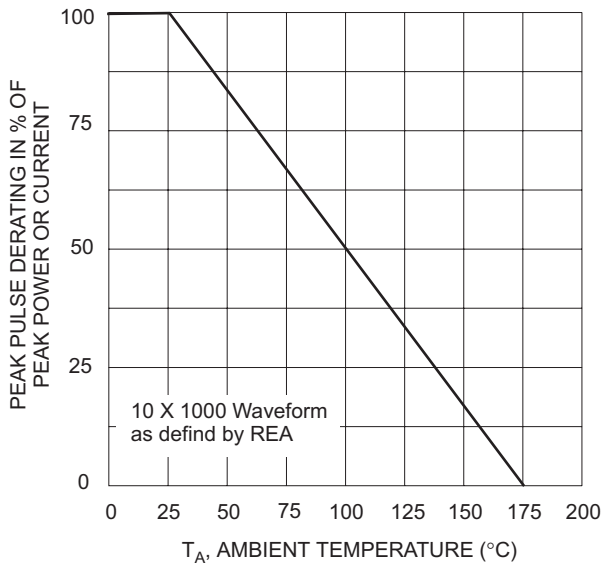


Fig. 4 Pulse Derating Curve

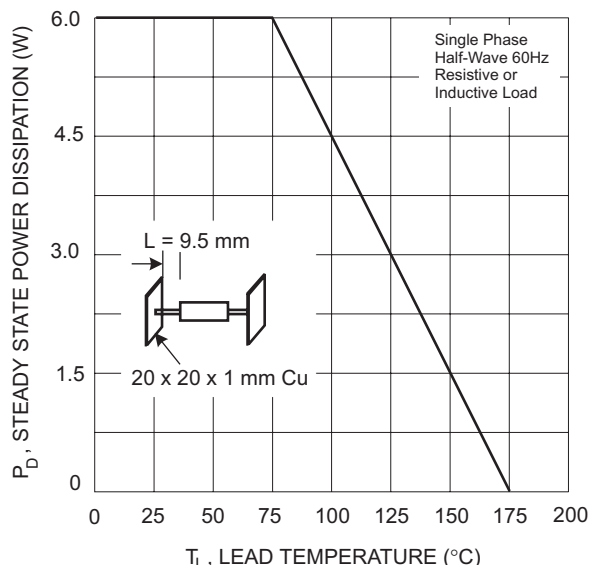


Fig. 5 Steady State Power Derating

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-G	5.00	6.40	7.55	10	9.6	312.5	1000
3KP5.0A-G	5.00	6.40	7.25	10	9.2	326.0	1000
3KP6.0-G	6.00	6.67	8.45	10	11.4	263.2	1000
3KP6.0A-G	6.00	6.67	7.67	10	10.3	291.3	1000
3KP6.5-G	6.50	7.22	9.14	10	12.3	243.9	500
3KP6.5A-G	6.50	7.22	8.30	10	11.2	267.9	500
3KP7.0-G	7.00	7.78	9.86	10	13.3	225.6	200
3KP7.0A-G	7.00	7.78	8.95	10	12.0	250.0	200
3KP7.5-G	7.50	8.33	10.67	1	14.3	209.8	100
3KP7.5A-G	7.50	8.33	9.58	1	12.9	232.6	100
3KP8.0-G	8.00	8.99	11.30	1	15.0	220.0	50
3KP8.0A-G	8.00	8.99	10.23	1	13.6	220.6	50
3KP8.5-G	8.50	9.44	11.92	1	15.9	188.8	25
3KP8.5A-G	8.50	9.44	10.82	1	14.4	208.4	25
3KP9.0-G	9.00	10.00	12.60	1	16.9	177.4	10
3KP9.0A-G	9.00	10.00	11.50	1	15.4	194.8	10
3KP10-G	10.00	11.10	14.10	1	18.8	159.6	5
3KP10A-G	10.00	11.10	12.80	1	17.0	176.4	5
3KP11-G	11.00	12.20	15.40	1	20.1	149.2	5
3KP11A-G	11.00	12.20	14.00	1	18.2	184.8	5
3KP12-G	12.00	13.30	16.90	1	22.0	136.4	5
3KP12A-G	12.00	13.30	15.30	1	19.9	150.6	5
3KP13-G	13.00	14.40	18.20	1	23.8	126.0	5
3KP13A-G	13.00	14.40	16.50	1	21.5	139.4	5
3KP14-G	14.00	15.60	19.80	1	25.8	116.2	5
3KP14A-G	14.00	15.60	17.90	1	23.2	129.4	5
3KP15-G	15.00	16.70	21.10	1	26.9	111.6	5
3KP15A-G	15.00	16.70	19.20	1	24.4	123.0	5
3KP16-G	16.00	17.80	22.60	1	28.8	104.2	5
3KP16A-G	16.00	17.80	20.50	1	26.0	115.4	5
3KP17-G	17.00	18.90	23.90	1	30.5	98.4	5
3KP17A-G	17.00	18.90	21.70	1	27.6	106.6	5
3KP18-G	18.00	20.00	25.30	1	32.2	93.2	5
3KP18A-G	18.00	20.00	23.30	1	29.2	102.8	5
3KP20-G	20.00	22.20	28.10	1	35.8	83.8	5
3KP20A-G	20.00	22.20	25.50	1	32.4	92.6	5
3KP22-G	22.00	24.40	30.90	1	39.4	76.2	5
3KP22A-G	22.00	24.40	28.00	1	35.5	84.4	5
3KP24-G	24.00	26.70	33.80	1	43.0	69.8	5
3KP24A-G	24.00	26.70	30.70	1	38.9	77.2	5
3KP26-G	26.00	28.90	36.60	1	46.6	64.4	5
3KP26A-G	26.00	28.90	33.20	1	42.1	71.2	5
3KP28-G	28.00	31.10	39.40	1	50.0	60.0	5
3KP28A-G	28.00	31.10	35.80	1	45.4	66.0	5
3KP30-G	30.00	33.30	42.20	1	53.5	56.0	5
3KP30A-G	30.00	33.30	38.30	1	48.4	62.0	5
3KP33-G	33.00	36.70	46.50	1	59.0	50.4	5
3KP33A-G	33.00	36.70	42.20	1	53.3	56.2	5
3KP36-G	36.00	40.00	50.70	1	64.3	46.6	5
3KP36A-G	36.00	40.00	46.00	1	58.1	51.6	5
3KP40-G	40.00	44.40	56.30	1	71.4	42.0	5
3KP40A-G	40.00	44.40	51.10	1	64.5	46.4	5
3KP43-G	43.00	47.80	60.50	1	76.6	39.2	5
3KP43A-G	43.00	47.80	54.90	1	69.4	43.2	5
3KP45-G	45.00	50.00	63.30	1	80.3	37.4	5
3KP45A-G	45.00	50.00	57.50	1	72.7	41.2	5
3KP48-G	48.00	53.30	67.50	1	85.5	35.0	5
3KP48A-G	48.00	53.30	61.30	1	77.4	38.8	5
3KP51-G	51.00	56.70	71.80	1	91.1	37.0	5
3KP51A-G	51.00	56.70	65.20	1	82.4	36.4	5
3KP54-G	54.00	60.00	76.00	1	96.3	31.2	5
3KP54A-G	54.00	60.00	69.00	1	87.1	34.4	5
3KP58-G	58.00	64.40	81.60	1	103.0	29.2	5
3KP58A-G	58.00	64.40	74.10	1	93.6	32.0	5
3KP60-G	60.00	66.70	84.50	1	107.0	28.0	5
3KP60A-G	60.00	66.70	76.70	1	96.8	31.0	5
3KP64-G	64.00	71.10	90.10	1	114.0	26.4	5
3KP64A-G	64.00	71.10	81.80	1	103.0	29.2	5
3KP70-G	70.00	77.80	98.60	1	125.0	24.0	5
3KP70A-G	70.00	77.80	89.50	1	113.0	26.6	5
3KP75-G	75.00	83.30	105.70	1	134.0	22.4	5
3KP75A-G	75.00	83.30	95.80	1	121.0	24.8	5
3KP78-G	78.00	86.70	109.80	1	139.0	21.6	5
3KP78A-G	78.00	86.70	99.70	1	126.0	22.8	5
3KP85-G	85.00	94.40	119.20	1	151.0	19.8	5
3KP85A-G	85.00	94.40	108.20	1	137.0	20.8	5
3KP90-G	90.00	100.00	126.50	1	160.0	18.8	5
3KP90A-G	90.00	100.00	115.50	1	146.0	20.6	5
3KP100-G	100.00	111.00	141.00	1	179.0	16.6	5
3KP100A-G	100.00	111.00	128.00	1	162.0	18.6	5
3KP110-G	110.00	122.00	154.50	1	196.0	15.4	5
3KP110A-G	110.00	122.00	140.50	1	177.0	16.8	5
3KP120-G	120.00	133.00	169.00	1	214.0	14.0	5
3KP120A-G	120.00	133.00	153.00	1	193.0	15.6	5
3KP130-G	130.00	144.00	182.50	1	231.0	13.0	5
3KP130A-G	130.00	144.00	165.50	1	209.0	14.4	5
3KP150-G	150.00	167.00	211.50	1	269.0	11.2	5
3KP150A-G	150.00	167.00	192.50	1	243.0	12.4	5
3KP160-G	160.00	178.00	226.00	1	287.0	10.4	5
3KP160A-G	160.00	178.00	205.00	1	259.0	11.6	5
3KP170-G	170.00	189.00	239.50	1	304.0	9.8	5
3KP170A-G	170.00	189.00	217.50	1	275.0	11.0	5

BI-DIRECTIONAL 3000 WATT AXIAL LEAD TVS

BI-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)
3KP5.0C-G	5.00	6.40	7.55	10	9.6	312.5	2000
3KP5.0CA-G	5.00	6.40	7.25	10	9.2	326.0	2000
3KP6.0C-G	6.00	6.67	8.45	10	11.4	263.2	2000
3KP6.0CA-G	6.00	6.67	7.67	10	10.3	291.3	2000
3KP6.5C-G	6.50	7.22	9.14	10	12.3	243.9	1000
3KP6.5CA-G	6.50	7.22	8.30	10	11.2	267.9	1000
3KP7.0C-G	7.00	7.78	9.86	10	13.3	225.6	400
3KP7.0CA-G	7.00	7.78	8.95	10	12.0	250.0	400
3KP7.5C-G	7.50	8.33	10.67	1	14.3	209.8	200
3KP7.5CA-G	7.50	8.33	9.58	1	12.9	232.6	200
3KP8.0C-G	8.00	8.99	11.30	1	15.0	220.0	100
3KP8.0CA-G	8.00	8.99	10.23	1	13.6	220.6	100
3KP8.5C-G	8.50	9.44	11.92	1	15.9	188.8	50
3KP8.5CA-G	8.50	9.44	10.82	1	14.4	208.4	50
3KP9.0C-G	9.00	10.00	12.60	1	16.9	177.4	20
3KP9.0CA-G	9.00	10.00	11.50	1	15.4	194.8	20
3KP10C-G	10.00	11.10	14.10	1	18.8	159.6	5
3KP10CA-G	10.00	11.10	12.80	1	17.0	176.4	5
3KP11C-G	11.00	12.20	15.40	1	20.1	149.2	5
3KP11CA-G	11.00	12.20	14.00	1	18.2	184.8	5
3KP12C-G	12.00	13.30	16.90	1	22.0	136.4	5
3KP12CA-G	12.00	13.30	15.30	1	19.9	150.6	5
3KP13C-G	13.00	14.40	18.20	1	23.8	126.0	5
3KP13CA-G	13.00	14.40	16.50	1	21.5	139.4	5
3KP14C-G	14.00	15.60	19.80	1	25.8	116.2	5
3KP14CA-G	14.00	15.60	17.90	1	23.2	129.4	5
3KP15C-G	15.00	16.70	21.10	1	26.9	111.6	5
3KP15CA-G	15.00	16.70	19.20	1	24.4	123.0	5
3KP16C-G	16.00	17.80	22.60	1	28.8	104.2	5
3KP16CA-G	16.00	17.80	20.50	1	26.0	115.4	5
3KP17C-G	17.00	18.90	23.90	1	30.5	98.4	5
3KP17CA-G	17.00	18.90	21.70	1	27.6	106.6	5
3KP18C-G	18.00	20.00	25.30	1	32.2	93.2	5
3KP18CA-G	18.00	20.00	23.30	1	29.2	102.8	5
3KP20C-G	20.00	22.20	28.10	1	35.8	83.8	5
3KP20CA-G	20.00	22.20	25.50	1	32.4	92.6	5
3KP22C-G	22.00	24.40	30.90	1	39.4	76.2	5
3KP22CA-G	22.00	24.40	28.00	1	35.5	84.4	5
3KP24C-G	24.00	26.70	33.80	1	43.0	69.8	5
3KP24CA-G	24.00	26.70	30.70	1	38.9	77.2	5
3KP26C-G	26.00	28.90	36.60	1	46.6	64.4	5
3KP26CA-G	26.00	28.90	33.20	1	42.1	71.2	5
3KP28C-G	28.00	31.10	39.40	1	50.0	60.0	5
3KP28CA-G	28.00	31.10	35.80	1	45.4	66.0	5
3KP30C-G	30.00	33.30	42.20	1	53.5	56.0	5
3KP30CA-G	30.00	33.30	38.30	1	48.4	62.0	5
3KP33C-G	33.00	36.70	46.50	1	59.0	50.4	5
3KP33CA-G	33.00	36.70	42.20	1	53.3	56.2	5
3KP36C-G	36.00	40.00	50.70	1	64.3	46.6	5
3KP36CA-G	36.00	40.00	46.00	1	58.1	51.6	5
3KP40C-G	40.00	44.40	56.30	1	71.4	42.0	5
3KP40CA-G	40.00	44.40	51.10	1	64.5	46.4	5
3KP43C-G	43.00	47.80	60.50	1	76.6	39.2	5
3KP43CA-G	43.00	47.80	54.90	1	69.4	43.2	5
3KP45C-G	45.00	50.00	63.30	1	80.3	37.4	5
3KP45CA-G	45.00	50.00	57.50	1	72.7	41.2	5
3KP48C-G	48.00	53.30	67.50	1	85.5	35.0	5
3KP48CA-G	48.00	53.30	61.30	1	77.4	38.8	5
3KP51C-G	51.00	56.70	71.80	1	91.1	37.0	5
3KP51CA-G	51.00	56.70	65.20	1	82.4	36.4	5
3KP54C-G	54.00	60.00	76.00	1	96.3	31.2	5
3KP54CA-G	54.00	60.00	69.00	1	87.1	34.4	5
3KP58C-G	58.00	64.40	81.60	1	103.0	29.2	5
3KP58CA-G	58.00	64.40	74.10	1	93.6	32.0	5
3KP60C-G	60.00	66.70	84.50	1	107.0	28.0	5
3KP60CA-G	60.00	66.70	76.70	1	96.8	31.0	5
3KP64C-G	64.00	71.10	90.10	1	114.0	26.4	5
3KP64CA-G	64.00	71.10	81.80	1	103.0	29.2	5
3KP70C-G	70.00	77.80	98.60	1	125.0	24.0	5
3KP70CA-G	70.00	77.80	89.50	1	113.0	26.6	5
3KP75C-G	75.00	83.30	105.70	1	134.0	22.4	5
3KP75CA-G	75.00	83.30	95.80	1	121.0	24.8	5
3KP78C-G	78.00	86.70	109.80	1	139.0	21.6	5
3KP78CA-G	78.00	86.70	99.70	1	126.0	22.8	5
3KP85C-G	85.00	94.40	119.20	1	151.0	19.8	5
3KP85CA-G	85.00	94.40	108.20	1	137.0	20.8	5
3KP90C-G	90.00	100.00	126.50	1	160.0	18.8	5
3KP90CA-G	90.00	100.00	115.50	1	146.0	20.6	5
3KP100C-G	100.00	111.00	141.00	1	179.0	16.6	5
3KP100CA-G	100.00	111.00	128.00	1	162.0	18.6	5
3KP110C-G	110.00	122.00	154.50	1	196.0	15.4	5
3KP110CA-G	110.00	122.00	140.50	1	177.0	16.8	5
3KP120C-G	120.00	133.00	169.00	1	214.0	14.0	5
3KP120CA-G	120.00	133.00	153.00	1	193.0	15.6	5
3KP130C-G	130.00	144.00	182.50	1	231.0	13.0	5
3KP130CA-G	130.00	144.00	165.50	1	209.0	14.4	5
3KP150C-G	150.00	167.00	211.50	1	269.0	11.2	5
3KP150CA-G	150.00	167.00	192.50	1	243.0	12.4	5
3KP160C-G	160.00	178.00	226.00	1	287.0	10.4	5
3KP160CA-G	160.00	178.00	205.00	1	259.0	11.6	5
3KP170C-G	170.00	189.00	239.50	1	304.0	9.8	5
3KP170CA-G	170.00	189.00	217.50	1	275.0	11.0	5

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