

5 KP6,5...5 KP110CA



Axial lead diode

Unidirectional and bidirectional Transient Voltage Suppressor diodes

5 KP6,5...5 KP110CA

Pulse Power

Dissipation: 5000 W

Stand-off

voltage: 6,5 ... 110 V

Features

- Max. solder temperature: 260°C
- Plastic material has UL classification 94V-0
- For bidirectional types (suffix "C" or "CA"), electrical characteristics apply in both directions.
- The standard tolerance of the breakdown voltage for each type is $\pm 10\%$. Suffix "A" denotes a tolerance of $\pm 5\%$ for the breakdown voltage.

Mechanical Data

- Plastic case $\varnothing 8 \times 7,5$ [mm]
- Weight approx.: 1,5 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 500 pieces per ammo

1) Non-repetitive current pulse see curve $I_{PPM} = f(t_r)$

2) Valid, if leads are kept at ambient temperature at a distance of 10 mm from case

3) Unidirectional diodes only

| Absolute Maximum Ratings | | $T_A = 25^\circ\text{C}$, unless otherwise specified | |
|--------------------------|---|---|------------------|
| Symbol | Conditions | Values | Units |
| P_{PPM} | Peak pulse power dissipation 10/1000 μs waveform ¹⁾ $T_a = 25^\circ\text{C}$ | 5000 | W |
| $P_{M(AV)}$ | Steady state power dissipation ²⁾ , $T_a = 25^\circ\text{C}$ | 8 | W |
| I_{FSM} | Peak forward surge current, 60 Hz half sine-wave ³⁾ $T_a = 25^\circ\text{C}$ | 400 | A |
| R_{thA} | Max. thermal resistance junction to ambient ²⁾ | 18 | K/W |
| R_{thT} | Max. thermal resistance junction to terminal | 4 | K/W |
| T_j | Operating junction temperature | - 50 ... + 175 | $^\circ\text{C}$ |
| T_s | Storage temperature | - 50 ... + 175 | $^\circ\text{C}$ |
| V_f | Max. instant. forw. voltage $I_f = 100 \text{ A}$ ³⁾ | <3,5 | V |
| | | - | V |

| Type | Characteristics | | | | | | |
|----------|--------------------------|------------------------|--------------------------|-----------|--------------------------|----------------------------------|----------------|
| | Stand-off voltage@ I_D | | Breakdown voltage@ I_T | | Test current I_T mA | Max. clamping voltage@ I_{PPM} | |
| | V_{WM} V | I_D μA | min. V | max. V | | V_C V | I_{PPM} A |
| 5 KP6,5 | 6,5 | 4000 | 7,22 | 9,14 | 50 | 12,3 | 407 |
| 5 KP6,5A | 6,5 | 4000 | 7,22 | 8,3 | 50 | 11,2 | 446 |
| 5 KP7,0 | 7 | 2000 | 7,78 | 9,86 | 50 | 13,3 | 376 |
| 5 KP7,0A | 7 | 2000 | 7,78 | 8,95 | 50 | 12 | 417 |
| 5 KP7,5 | 7,5 | 500 | 8,33 | 10,67 | 5 | 14,3 | 350 |
| 5 KP7,5A | 7,5 | 500 | 8,33 | 9,58 | 5 | 12,9 | 388 |
| 5 KP8,0 | 8 | 300 | 8,89 | 11,3 | 5 | 15 | 333 |
| 5 KP8,0A | 8 | 300 | 8,89 | 10,23 | 5 | 13,6 | 368 |
| 5 KP8,5 | 8,5 | 100 | 9,44 | 11,92 | 5 | 15,6 | 321 |
| 5 KP8,5A | 8,5 | 100 | 9,44 | 10,82 | 5 | 14,4 | 347 |
| 5 KP9,0 | 9 | 40 | 10 | 12,6 | 5 | 16,9 | 296 |
| 5 KP9,0A | 9 | 40 | 10 | 11,5 | 5 | 15,4 | 325 |
| 5 KP10 | 10 | 10 | 11,1 | 14,1 | 5 | 18,8 | 266 |
| 5 KP10A | 10 | 10 | 11,1 | 12,8 | 5 | 17 | 294 |
| 5 KP11 | 11 | 10 | 12,2 | 15,4 | 5 | 20,1 | 249 |
| 5 KP11A | 11 | 10 | 12,2 | 14 | 5 | 18,2 | 275 |
| 5 KP12 | 12 | 10 | 13,3 | 16,9 | 5 | 22 | 227 |
| 5 KP12A | 12 | 10 | 13,3 | 15,3 | 5 | 19,9 | 251 |
| 5 KP13 | 13 | 10 | 14,4 | 18,2 | 5 | 23,8 | 210 |
| 5 KP13A | 13 | 10 | 14,4 | 16,5 | 5 | 21,5 | 233 |
| 5 KP14 | 14 | 10 | 15,6 | 19,8 | 5 | 25,8 | 194 |
| 5 KP14A | 14 | 10 | 15,6 | 17,9 | 5 | 23,2 | 216 |
| 5 KP15 | 15 | 10 | 16,7 | 21,1 | 5 | 26,9 | 186 |
| 5 KP15A | 15 | 10 | 16,7 | 19,2 | 5 | 24,4 | 205 |
| 5 KP16 | 16 | 10 | 17,8 | 22,6 | 5 | 28,8 | 174 |
| 5 KP16A | 16 | 10 | 17,8 | 20,5 | 5 | 26 | 192 |
| 5 KP17 | 17 | 10 | 18,9 | 23,9 | 5 | 30,5 | 164 |
| 5 KP17A | 17 | 10 | 18,9 | 21,7 | 5 | 27,6 | 181 |
| 5 KP18 | 18 | 10 | 20 | 25,3 | 5 | 32,2 | 155 |
| 5 KP18A | 18 | 10 | 20 | 23,3 | 5 | 29,2 | 171 |
| 5 KP20 | 20 | 10 | 22,2 | 28,1 | 5 | 35,8 | 140 |
| 5 KP20A | 20 | 10 | 22,2 | 25,5 | 5 | 32,4 | 154 |
| 5 KP22 | 22 | 10 | 24,4 | 30,9 | 5 | 39,4 | 127 |
| 5 KP22A | 22 | 10 | 24,4 | 28 | 5 | 35,5 | 141 |
| 5 KP24 | 24 | 10 | 26,7 | 33,8 | 5 | 43 | 116 |
| 5 KP24A | 24 | 10 | 26,7 | 30,7 | 5 | 38,9 | 129 |
| 5 KP26 | 26 | 10 | 28,9 | 36,6 | 5 | 46,6 | 107 |
| 5 KP26A | 26 | 10 | 28,9 | 33,2 | 5 | 42,1 | 119 |
| 5 KP28 | 28 | 10 | 31,1 | 39,4 | 5 | 50 | 100 |

| Type | Characteristics | | | | | | |
|----------|----------------------------------|----------------------|----------------------------------|-----------|-----------------------------------|--|-----------------------|
| | Stand-off voltage@I _D | | Breakdown voltage@I _T | | Test current I _T mA | Max. clamping voltage@I _{PPM} | |
| | V _{WM} V | I _D μA | min. V | max. V | | V _C V | I _{PPM} A |
| 5 KP28A | 28 | 10 | 31,1 | 35,8 | 5 | 45,4 | 110 |
| 5 KP30 | 30 | 10 | 33,3 | 42,2 | 5 | 53,5 | 93 |
| 5 KP30A | 30 | 10 | 33,3 | 38,3 | 5 | 48,4 | 103 |
| 5 KP33 | 33 | 10 | 36,7 | 46,5 | 5 | 59 | 85 |
| 5 KP33A | 33 | 10 | 36,7 | 42,2 | 5 | 53,3 | 94 |
| 5 KP36 | 36 | 10 | 40 | 50,7 | 5 | 64,3 | 78 |
| 5 KP36A | 36 | 10 | 40 | 46 | 5 | 58,1 | 86 |
| 5 KP40 | 40 | 10 | 44,4 | 56,3 | 5 | 71,4 | 70 |
| 5 KP40A | 40 | 10 | 44,4 | 51,1 | 5 | 64,5 | 78 |
| 5 KP43 | 43 | 10 | 47,8 | 60,5 | 5 | 76,7 | 65 |
| 5 KP43A | 43 | 10 | 47,8 | 54,9 | 5 | 69,4 | 72 |
| 5 KP45 | 45 | 10 | 50 | 63,3 | 5 | 80,3 | 62 |
| 5 KP45A | 45 | 10 | 50 | 57,5 | 5 | 72,7 | 69 |
| 5 KP48 | 48 | 10 | 53,3 | 67,5 | 5 | 85,5 | 58 |
| 5 KP48A | 48 | 10 | 53,3 | 61,3 | 5 | 77,4 | 65 |
| 5 KP51 | 51 | 10 | 56,7 | 71,8 | 5 | 91,1 | 55 |
| 5 KP51A | 51 | 10 | 56,7 | 65,2 | 5 | 82,4 | 61 |
| 5 KP54 | 54 | 10 | 60 | 76 | 5 | 96,3 | 52 |
| 5 KP54A | 54 | 10 | 60 | 69 | 5 | 87,1 | 57 |
| 5 KP58 | 58 | 10 | 64,4 | 81,6 | 5 | 103 | 49 |
| 5 KP58A | 58 | 10 | 64,4 | 74,1 | 5 | 93,6 | 53 |
| 5 KP60 | 60 | 10 | 66,7 | 84,5 | 5 | 107 | 47 |
| 5 KP60A | 60 | 10 | 66,7 | 76,7 | 5 | 96,8 | 52 |
| 5 KP64 | 64 | 10 | 71,1 | 90,1 | 5 | 114 | 44 |
| 5 KP64A | 64 | 10 | 71,1 | 81,8 | 5 | 103 | 49 |
| 5 KP70 | 70 | 10 | 77,8 | 98,6 | 5 | 125 | 40 |
| 5 KP70A | 70 | 10 | 77,8 | 89,5 | 5 | 113 | 44 |
| 5 KP75 | 75 | 10 | 83,3 | 105,7 | 5 | 134 | 37 |
| 5 KP75A | 75 | 10 | 83,3 | 95,8 | 5 | 121 | 41 |
| 5 KP78 | 78 | 10 | 86,7 | 109,8 | 5 | 139 | 36 |
| 5 KP78A | 78 | 10 | 86,7 | 99,7 | 5 | 126 | 40 |
| 5 KP85 | 85 | 10 | 94,4 | 119,2 | 5 | 151 | 33 |
| 5 KP85A | 85 | 10 | 94,4 | 108,2 | 5 | 137 | 36 |
| 5 KP90 | 90 | 10 | 100 | 126,5 | 5 | 160 | 31 |
| 5 KP90A | 90 | 10 | 100 | 115,5 | 5 | 146 | 34 |
| 5 KP100 | 100 | 10 | 111 | 141 | 5 | 179 | 28 |
| 5 KP100A | 100 | 10 | 111 | 128 | 5 | 162 | 31 |
| 5 KP110 | 110 | 10 | 122 | 154,5 | 5 | 196 | 26 |
| 5 KP110A | 110 | 10 | 122 | 140,5 | 5 | 177 | 28 |



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