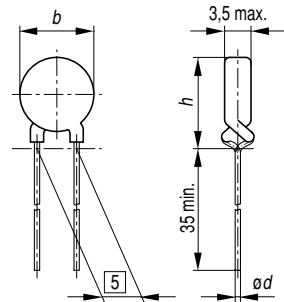


**Applications**

- Overcurrent and short-circuit protection

**Features**

- Lead-free terminals
- Manufacturer's logo and type designation stamped on in white
- Low resistance
- For rated currents of up to 1,8 A
- UL approval to UL 1434 for  $V_{\max} = 15$  V and  $V_N = 12$  V (file number E69802)
- VDE approval (license number 104843 E)



TPT0647-V

**Options**

- Leadless disks and leaded disks without coating available on request
- Thermistors with diameter  $b \leq 11,0$  mm are also available on tape (to IEC 60286-2)

**Delivery mode**

- Cardboard strips (standard)
- Cardboard tape reeled or in AMMO pack on request

Dimensions (mm)

| Type  | $b_{\max}$ | $\varnothing d$ | $h_{\max}$ |
|-------|------------|-----------------|------------|
| C 935 | 22,0       | 0,6             | 25,5       |
| C 945 | 17,5       | 0,6             | 21,0       |
| C 955 | 13,5       | 0,6             | 17,0       |
| C 965 | 11,0       | 0,6             | 14,5       |
| C 975 | 9,0        | 0,6             | 12,5       |
| C 985 | 6,5        | 0,6             | 10,0       |
| C 995 | 4,0        | 0,5             | 7,5        |

**General technical data**

|   |                  |            |                  |
|---|------------------|------------|------------------|
| Max. operating voltage ( $T_A = 60^\circ\text{C}$ ) | $V_{\max}$       | 30         | VDC or VAC       |
| Rated voltage                                       | $V_N$            | 12, 24     | VDC or VAC       |
| Switching cycles (typ.)                             | $N$              | 100        |                  |
| Reference temperature (typ.)                        | $T_{\text{Ref}}$ | 120        | $^\circ\text{C}$ |
| Resistance tolerance                                | $\Delta R_N$     | $\pm 25\%$ |                  |
| Operating temperature range ( $V = 0$ )             | $T_{\text{op}}$  | $-40/+125$ | $^\circ\text{C}$ |
|   | $T_{\text{op}}$  | $0/+60$    | $^\circ\text{C}$ |

**Electrical specifications and ordering codes**

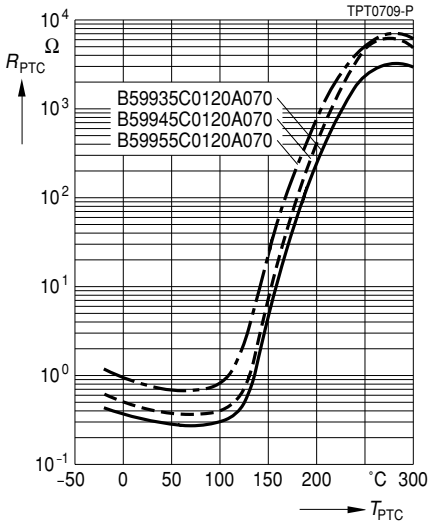
| Type  | $I_N$ | $I_S$ | $I_{S\max}$<br>( $V = V_{\max}$ ) | $I_r$ (typ.)<br>( $V = V_{\max}$ ) | $R_N$    | $R_{\min}$ | Ordering code   |
|-------|-------|-------|-----------------------------------|------------------------------------|----------|------------|-----------------|
|       | mA    | mA    | A                                 | mA                                 | $\Omega$ | $\Omega$   |                 |
| C 935 | 1800  | 3600  | 10,0                              | 170                                | 0,3      | 0,2        | B59935C0120A070 |
| C 945 | 1300  | 2600  | 8,0                               | 115                                | 0,45     | 0,3        | B59945C0120A070 |
| C 955 | 850   | 1700  | 5,5                               | 80                                 | 0,8      | 0,5        | B59955C0120A070 |
| C 965 | 600   | 1200  | 4,3                               | 70                                 | 1,2      | 0,7        | B59965C0120A070 |
| C 975 | 450   | 900   | 3,0                               | 60                                 | 1,8      | 1,1        | B59975C0120A070 |
| C 985 | 250   | 500   | 1,0                               | 45                                 | 4,6      | 2,7        | B59985C0120A070 |
| C 995 | 120   | 240   | 0,7                               | 25                                 | 13       | 7,8        | B59995C0120A070 |

**Reliability data**

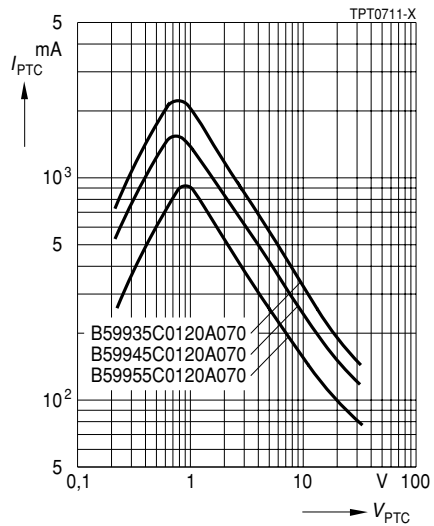
| Test                                   | Standard                      | Test conditions  | $ \Delta R_{25}/R_{25} $ |
|--|-------------------------------|--|--------------------------|
| Switching test at room temperature     | IEC 60738-1                   | $I_{Smax}$<br>$V_{max}$<br>Number of cycles: 100   | < 25 %                   |
| Dry heat at upper category temperature | IEC 60738-1                   | Storage at upper category temperature for<br>$t$ : 1000 h  | < 25 %                   |
| Life test at $V_{max}/T_{op}$          | IEC 60738-1                   | Storage at $V_{max}/T_{op}$ for<br>$t$ : 1000 h  | < 25 %                   |
| Storage in damp heat                   | IEC 60068-2-3                 | Temperature of air: 40 °C<br>Relative humidity of air: 93 %<br>Duration: 56 days   | < 10 %                   |
| Rapid change of temperature in air     | IEC 60068-2-14,<br>Test $N_a$ | $T = T_{LCT}$ , $T = T_{UCT}$<br>Number of cycles: 5<br>$t$ : 30 min   | < 10 %                   |
| Vibration                              | IEC 60068-2-6,<br>Test $F_C$  | $f = 10-55$ Hz<br>$h = 0,75$ mm (respectively 10 g)<br>$t$ : 3 · 2 h   | < 5 %                    |
| Bump                                   | IEC 60068-2-27                | Pulse shape: half-sine<br>$a = 50$ g<br>Pulse duration: 1 ms; 6 · 3 pulses   | < 5 %                    |
| Climatic sequence                      | IEC 60068-2-30                | Dry heat: $T = T_{UCT}$<br>$t$ : 16 h<br>Damp heat first cycle<br>Cold: $T = T_{LCT}$<br>$t$ : 2 h<br>Damp heat 5 cycles | < 10 %                   |

**Characteristics (typical)**

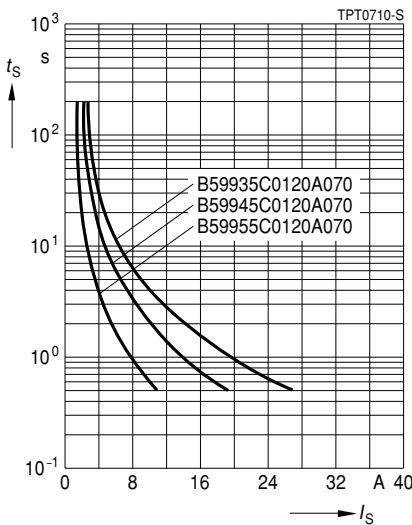
PTC resistance  $R_{PTC}$  versus  
 PTC temperature  $T_{PTC}$   
 (measured at low signal voltage)



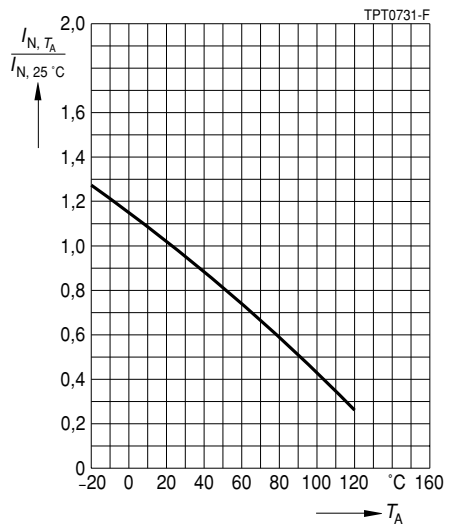
PTC current  $I_{PTC}$  versus PTC voltage  $V_{PTC}$   
 (measured at 25 °C in still air)



Switching time  $t_S$  versus switching current  $I_S$   
 (measured at 25 °C in still air)

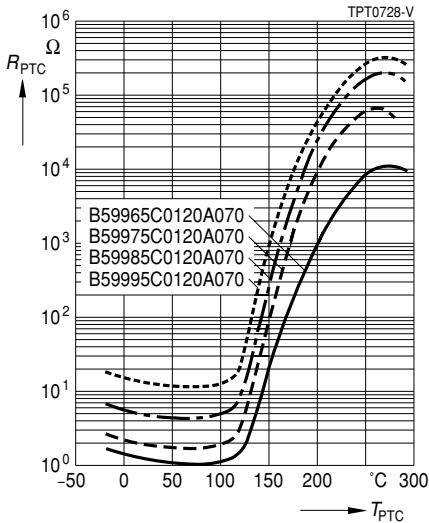


Rated current  $I_N$  versus ambient temperature  $T_A$   
 (measured in still air)

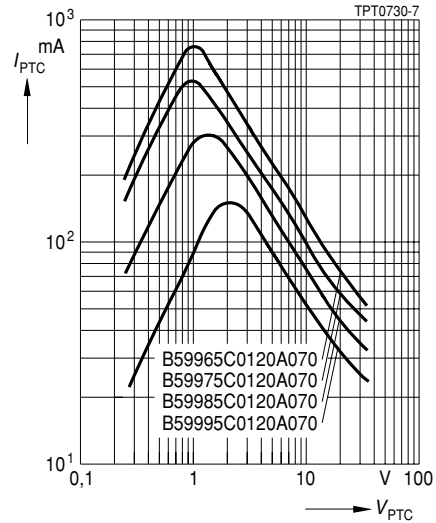


**Characteristics (typical)**

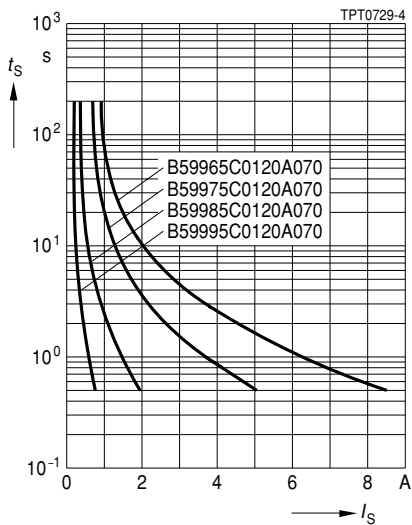
PTC resistance  $R_{PTC}$  versus  
PTC temperature  $T_{PTC}$   
(measured at low signal voltage)



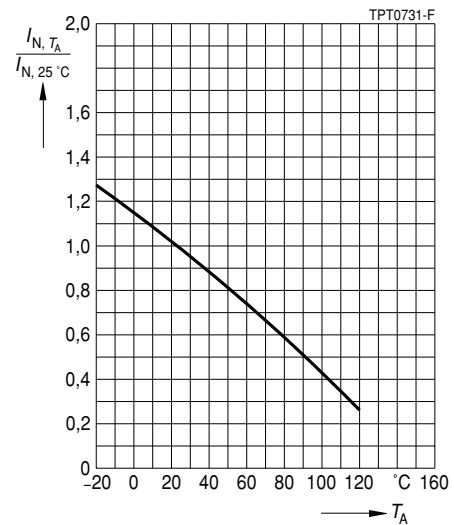
PTC current  $I_{PTC}$  versus PTC voltage  $V_{PTC}$   
(measured at 25 °C in still air)



Switching time  $t_S$  versus switching current  $I_S$   
(measured at 25 °C in still air)



Rated current  $I_N$  versus ambient temperature  $T_A$   
(measured in still air)



**Herausgegeben von EPCOS AG**

**Unternehmenskommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND**

**☎ ++49 89 636 09, FAX (0 89) 636-2 26 89**

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**Corporate Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY**

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