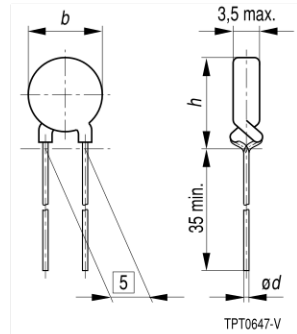


### Applications

- 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

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

### 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

### General technical data

Max. operating voltage ( $T_A = 60$ °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	°C
Resistance tolerance	$\Delta R_N$	$\pm 25$ %	
Operating temperature range ( $V = 0$ )	$T_{\text{op}}$	- 40/+ 125	°C
	$T_{\text{op}}$	0/+ 60	°C

### Electrical specifications and ordering codes

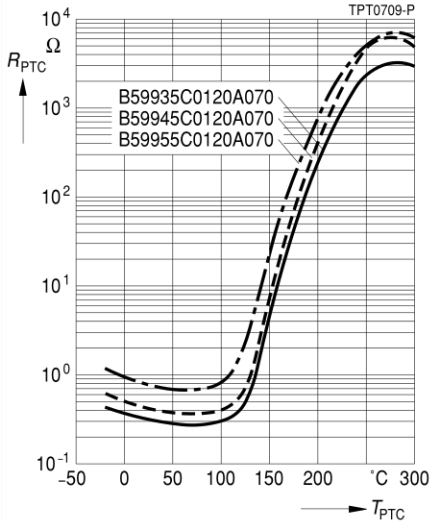
Type	$I_N$	$I_S$	$I_{S\max}$ ( $V = V_{\max}$ )	$I_r$ (typ.) ( $V = V_{\max}$ )	$R_N$	$R_{\min}$	Ordering code
	mA	mA	A	mA	$\Omega$	$\Omega$	
C 935	1800	3600	10,0	170	0,3	0,2	B59935C0120A070
C 945	1300	2600	8,0	115	0,45	0,3	B59945C0120A070
C 955	850	1700	5,5	80	0,8	0,5	B59955C0120A070
C 965	600	1200	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**

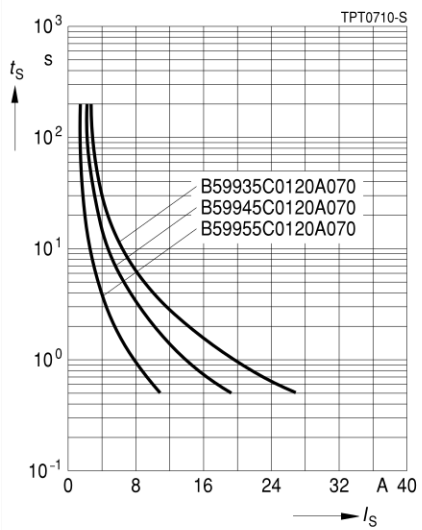
Test	Standard	Test conditions	$ \Delta R_{25}/R_{25} $
Switching test at room temperature	IEC 60738-1	$I_{Smax}$ $V_{max}$ Number of cycles: 100	< 25%
Dry heat at upper category temperature	IEC 60738-1	Storage at upper category temperature for $t$ : 1000 h	< 25%
Life test at $V_{max}/T_{op}$	IEC 60738-1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

**Characteristics (typical)**

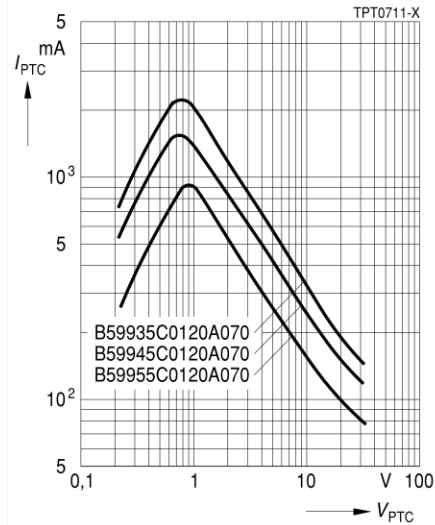
PTC resistance  $R_{PTC}$  versus  
 PTC temperature  $T_{PTC}$   
 (measured at low signal voltage)



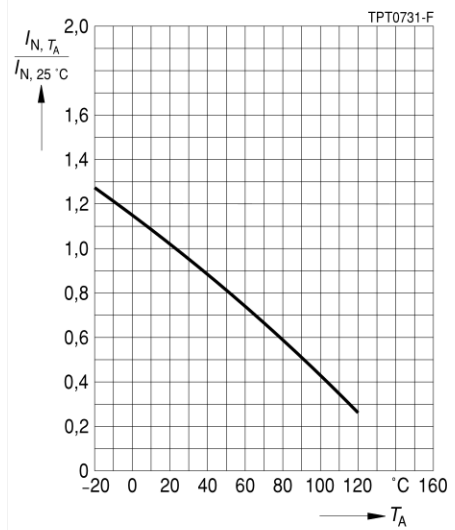
Switching time  $t_S$  versus switching current  $I_S$   
 (measured at 25 °C in still air)



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

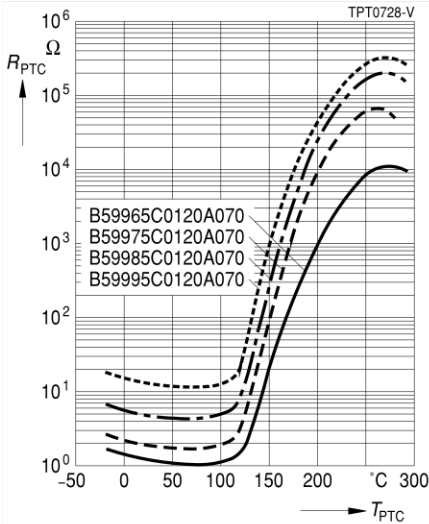


Rated current  $I_N$  versus ambient temperature  $T_A$   
 (measured in still air)

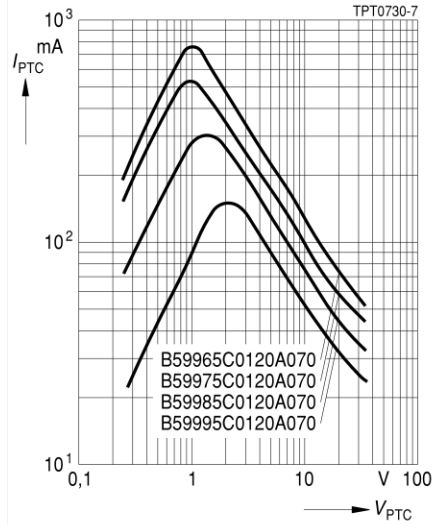


**Characteristics (typical)**

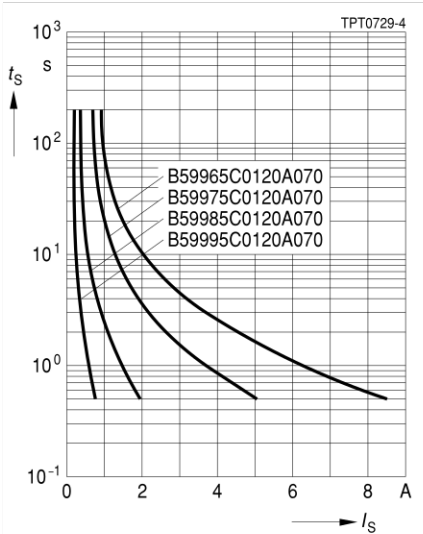
PTC resistance  $R_{PTC}$  versus  
 PTC temperature  $T_{PTC}$   
 (measured at low signal voltage)



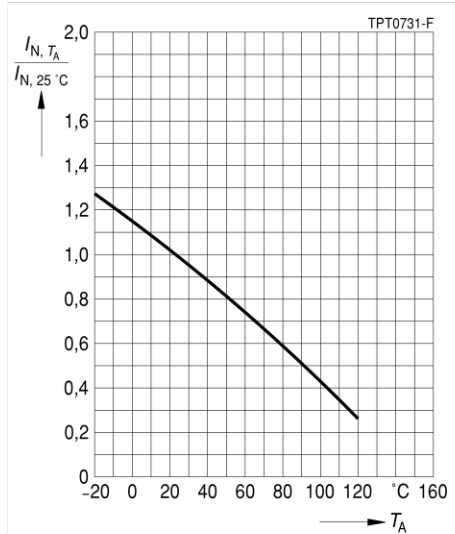
PTC current  $I_{PTC}$  versus PTC voltage  $V_{PTC}$   
 (measured at 25 °C in still air)



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)



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