

**Applications**

- Overcurrent and short-circuit protection

**Features**

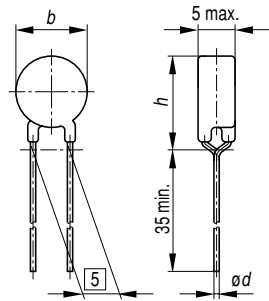
- Lead-free terminals
- Manufacturer's logo and type designation stamped on in yellow
- UL approval to UL 1434 with  $V_{\max} = 125 \text{ V}$  and  $V_N = 110 \text{ V}$  (file number E69802)
- VDE approval (license number 104843 E)

**Options**

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

**Delivery mode**

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



TPT0648-4

Dimensions (mm)

Type	$b_{\max}$	$\varnothing d$	$h_{\max}$
C 830	22,0	0,6	25,5
C 840	17,5	0,6	21,0
C 850	13,5	0,6	17,0
C 860	11,0	0,6	14,5
C 870	9,0	0,6	12,5
C 880	6,5	0,6	10,0
C 890	4,0	0,5	7,5

**General technical data**

Max. operating voltage ( $T_A = 60 \text{ }^\circ\text{C}$ )	$V_{\max}$	160	VDC or VAC
Rated voltage	$V_N$	110	VDC or VAC
Switching cycles (typ.)	$N$	100	
Reference temperature (typ.)	$T_{\text{Ref}}$	160	$^\circ\text{C}$
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**

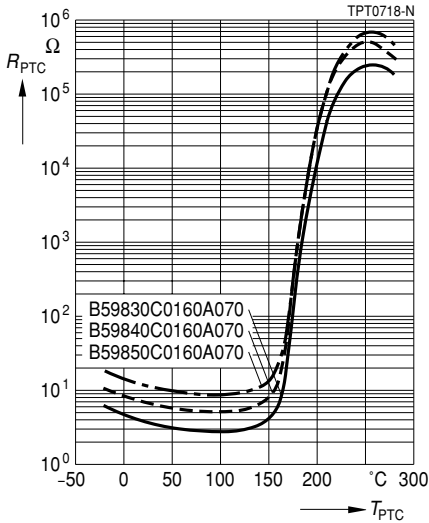
Type	$I_N$	$I_S$	$I_{S\max}$ ( $V = V_{\max}$ )	$I_r$ (typ.) ( $V = V_{\max}$ )	$R_N$	$R_{\min}$	Ordering code
	mA	mA	A	mA	$\Omega$	$\Omega$	
C 830	525	1050	7,0	24	3,7	2,2	B59830C0160A070
C 840	400	800	4,1	18	6	3,6	B59840C0160A070
C 850	250	500	2,2	16	10	6,0	B59850C0160A070
C 860	180	360	1,5	13	15	7,8	B59860C0160A070
C 870	125	250	1,0	11	25	13,1	B59870C0160A070
C 880	70	140	0,4	8	70	36,7	B59880C0160A070
C 890	35	70	0,2	6	150	78,7	B59890C0160A070

**Reliability data**

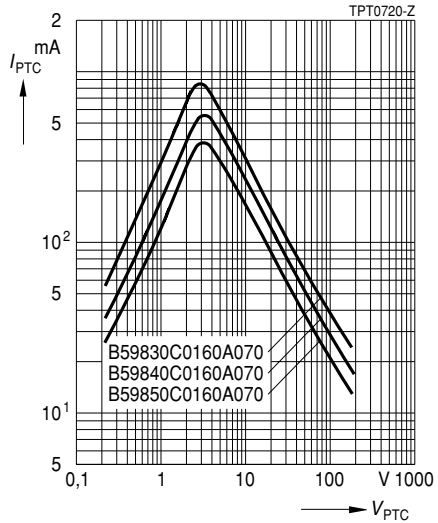
Test	Standard	Test conditions	$ \Delta R_{25}/R_{25} $
Switching test at room temperature	IEC 60738-1	$I_{Smax}$ $V_{max}$ Number of cycles: 100	< 25 %
Dry heat at upper category temperature	IEC 60738-1	Storage at upper category temperature for $t$ : 1000 h	< 25 %
Life test at $V_{max}/T_{op}$	IEC 60738-1	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)**

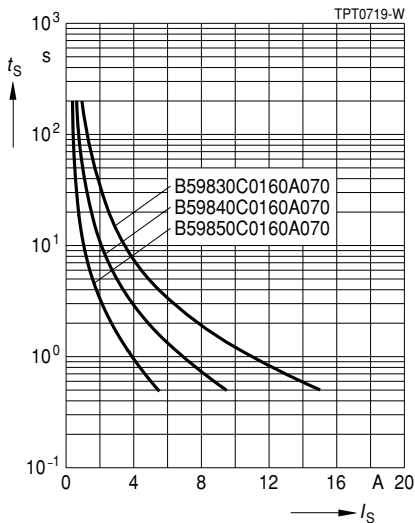
PTC resistance  $R_{PTC}$  versus  
 PTC temperature  $T_{PTC}$   
 (measured at low signal voltage)



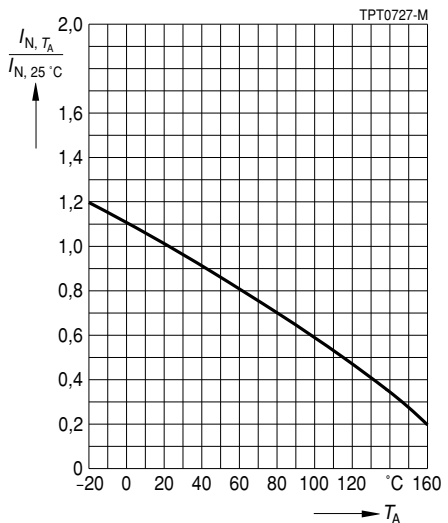
PTC current  $I_{PTC}$  versus PTC voltage  $V_{PTC}$   
 (measured at 25 °C in still air)



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

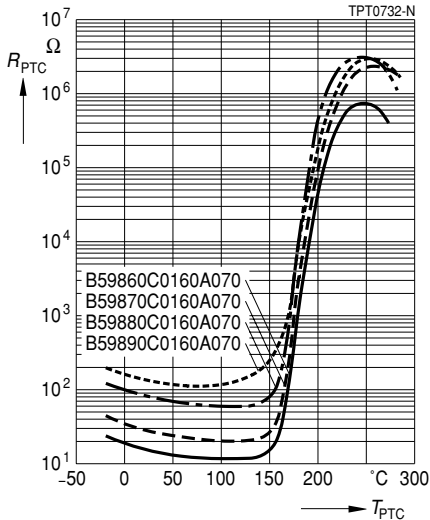


Rated current  $I_N$  versus ambient temperature  $T_A$   
 (measured in still air)

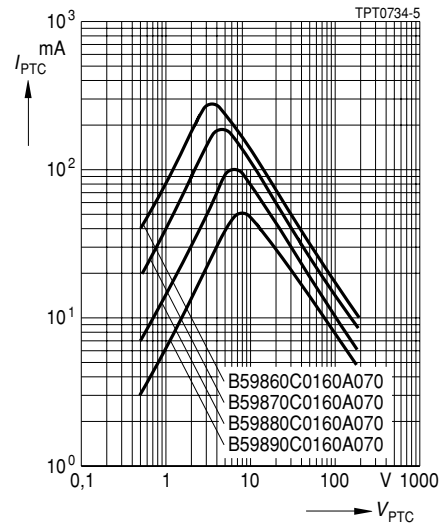


**Characteristics (typical)**

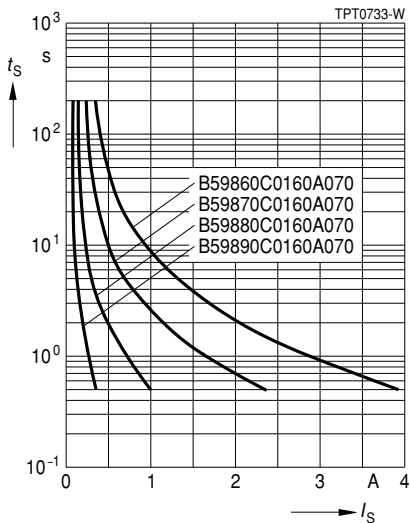
PTC resistance  $R_{PTC}$  versus  
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 (measured at low signal voltage)



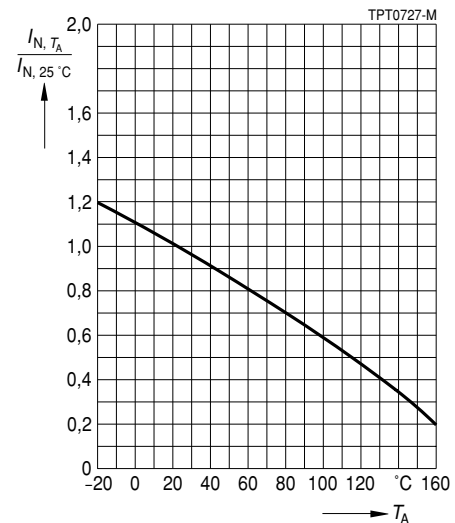
PTC current  $I_{PTC}$  versus PTC voltage  $V_{PTC}$   
 (measured at 25 °C in still air)



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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