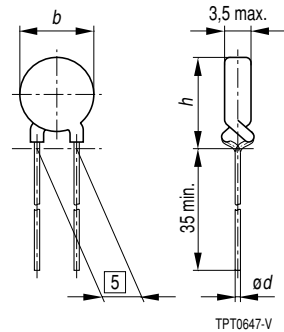


**Applications**

- Overcurrent and short-circuit protection

**Features**

- Lead-free terminals
- Manufacturer's logo and type designation stamped on in yellow
- Low resistance
- For rated currents of up to 2,1 A
- High thermal stability
- UL approval to UL 1434 (file number E69802)
- VDE approval (license number 104843 E)


**Options**

- Leadless disks and leaded disks without coating available on request
- Thermistors with diameter  $b \leq 11,0$  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 ( $T_A = 60^\circ\text{C}$ )	$V_{\max}$	20	VDC or VAC
Rated voltage	$V_N$	12	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**

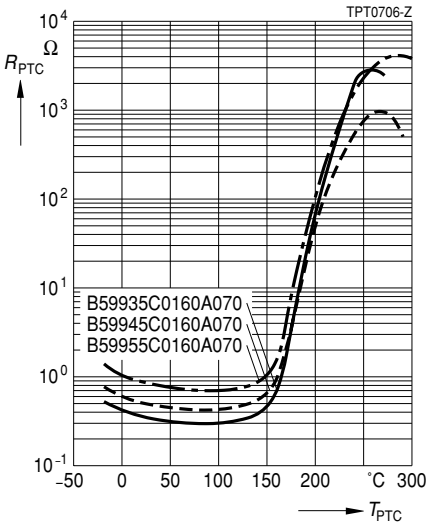
Type	$I_N$	$I_S$	$I_{S\max}$ ( $V = V_{\max}$ )	$I_r$ (typ.) ( $V = V_{\max}$ )	$I_r$ (typ.) ( $V = V_N$ )	$R_N$	$R_{\min}$	Ordering code
	mA	mA	A	mA	mA	$\Omega$	$\Omega$	
C 935	2100	4150	10,0	240	380	0,3	0,2	B59935C0160A070
C 945	1500	3050	8,0	170	270	0,45	0,3	B59945C0160A070
C 955	950	1900	5,5	120	190	0,8	0,5	B59955C0160A070
C 965	700	1450	4,3	105	165	1,2	0,7	B59965C0160A070
C 975	550	1100	3,0	85	135	1,8	1,1	B59975C0160A070
C 985	300	600	1,0	65	100	4,6	2,7	B59985C0160A070
C 995	150	300	0,7	40	65	13	7,8	B59995C0160A070

**Reliability data**

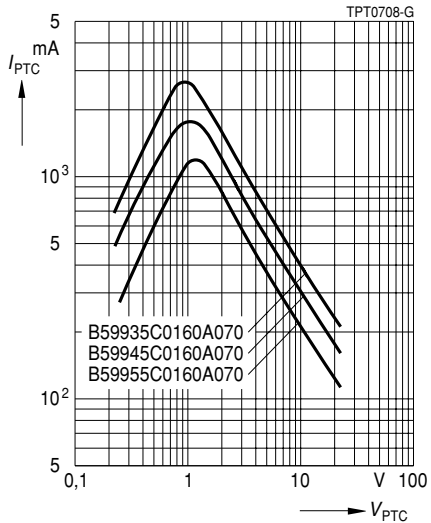
Test	Standard	Test conditions	$ \Delta R_{25}/R_{25} $
Switching test at room temperature	IEC 60738-1	$I_{Smax}$ $V_{max}$ Number of cycles: 100	< 25 %
Dry heat at upper category temperature	IEC 60738-1	Storage at upper category temperature for $t$ : 1000 h	< 25 %
Life test at $V_{max}/T_{op}$	IEC 60738-1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

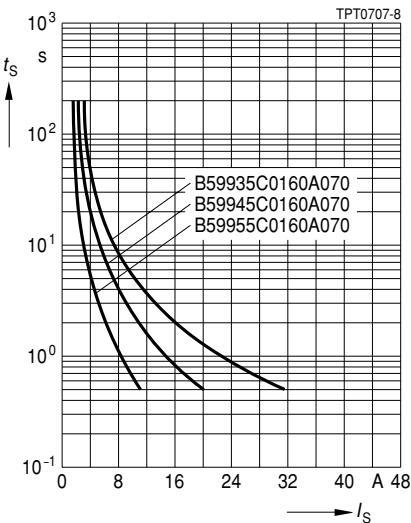
PTC resistance  $R_{PTC}$  versus  
 PTC temperature  $T_{PTC}$   
 (measured at low signal voltage)



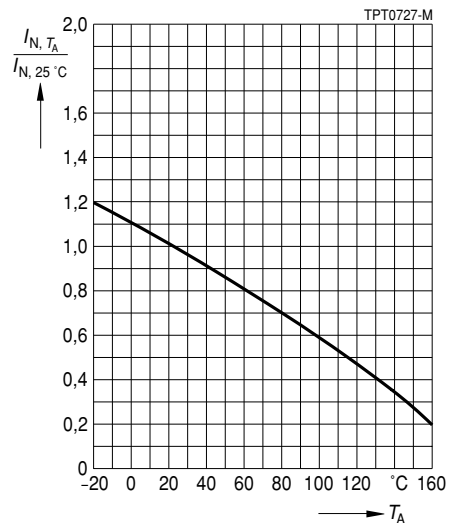
PTC current  $I_{PTC}$  versus PTC voltage  $V_{PTC}$   
 (measured at 25 °C in still air)



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

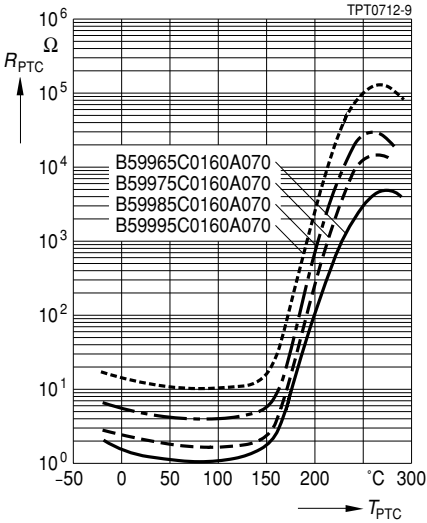


Rated current  $I_N$  versus ambient temperature  $T_A$   
 (measured in still air)

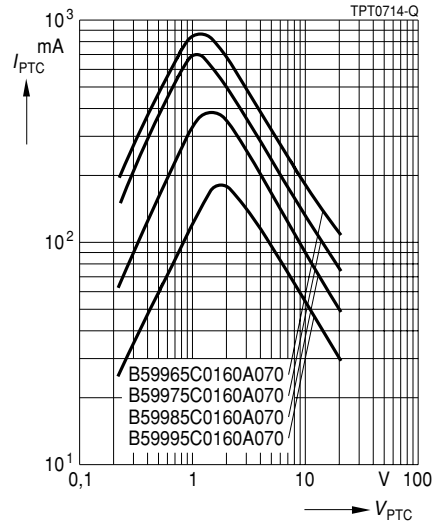


**Characteristics (typical)**

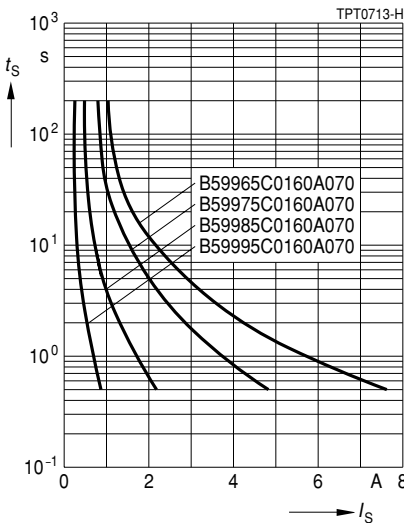
PTC resistance  $R_{PTC}$  versus  
PTC temperature  $T_{PTC}$   
(measured at low signal voltage)



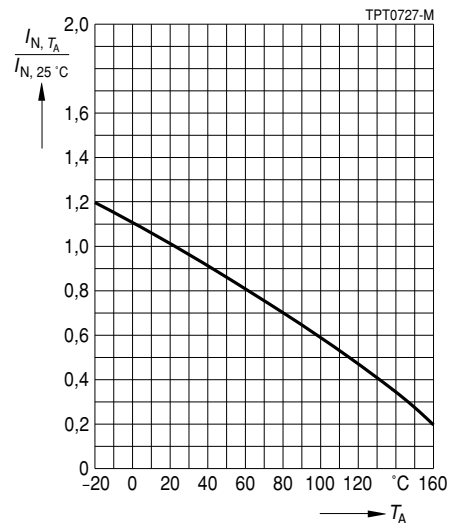
PTC current  $I_{PTC}$  versus PTC voltage  $V_{PTC}$   
(measured at 25 °C in still air)



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**

© EPCOS AG 2002. Vervielfältigung, Veröffentlichung, Verbreitung und Verwertung dieser Broschüre und ihres Inhalts ohne ausdrückliche Genehmigung der EPCOS AG nicht gestattet.

Bestellungen unterliegen den vom ZVEI empfohlenen Allgemeinen Lieferbedingungen für Erzeugnisse und Leistungen der Elektroindustrie, soweit nichts anderes vereinbart wird.

Diese Broschüre ersetzt die vorige Ausgabe.

Fragen über Technik, Preise und Liefermöglichkeiten richten Sie bitte an den Ihnen nächstgelegenen Vertrieb der EPCOS AG oder an unsere Vertriebsgesellschaften im Ausland. Bauelemente können aufgrund technischer Erfordernisse Gefahrstoffe enthalten. Auskünfte darüber bitten wir unter Angabe des betreffenden Typs ebenfalls über die zuständige Vertriebsgesellschaft einzuholen.

**Published by EPCOS AG**

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

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

© EPCOS AG 2002. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.