

Overcurrent protection

Leaded disks, coated, 12 V, 24 V

C935 ... C995

Applications

- Overcurrent protection
- 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 $V_R = 12$ V (file number E69802)
- RoHS-compatible

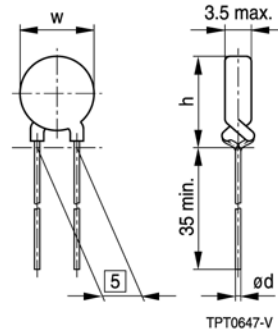
Options

- Leadless disks and leaded disks without coating available on request
- Thermistors with diameter $w \leq 11.0$ mm are also available on tape (to IEC 60286-2)

Delivery mode

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

Dimensional drawing




Dimensions (mm)

Type	w_{\max}	h_{\max}	$\varnothing d$
C935	22.0	25.5	0.6
C945	17.5	21.0	0.6
C955	13.5	17.0	0.6
C965	11.0	14.5	0.6
C975	9.0	12.5	0.6
C985	6.5	10.0	0.6
C995	4.0	7.5	0.5

General technical data

Max. operating voltage	$(T_A = 60\text{ }^\circ\text{C})$	V_{\max}	30	V DC or V AC
Rated voltage		V_R	12, 24	V DC or V AC
Switching cycles		N	100	
Reference temperature	(typ.)	T_{ref}	120	$^\circ\text{C}$
Tolerance of R_R		ΔR_R	± 25	%
Operating temperature range	$(V = 0)$	T_{op}	$-40/+125$	$^\circ\text{C}$
Operating temperature range	$(V = V_{\max})$	T_{op}	$-40/+85$	$^\circ\text{C}$

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Electrical specifications and ordering codes

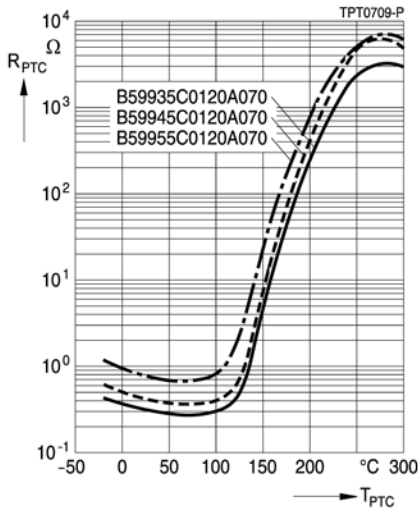
Type	I_R mA	I_S mA	I_{Smax} ($V = V_{max}$) A	I_r (typ.) ($V = V_{max}$) mA	R_R Ω	R_{min} Ω	Approvals 	Ordering code
C935	1800	3600	10.0	170	0.3	0.2	X	B59935C0120A070
C945	1300	2600	8.0	115	0.45	0.3	X	B59945C0120A070
C955	850	1700	5.5	80	0.8	0.5	X	B59955C0120A070
C965	600	1200	4.3	70	1.2	0.7	X	B59965C0120A070
C975	450	900	3.0	60	1.8	1.1	X	B59975C0120A070
C985	250	500	1.0	45	4.6	2.7	X	B59985C0120A070
C995	120	240	0.7	25	13	7.8	X	B59995C0120A070

Reliability data

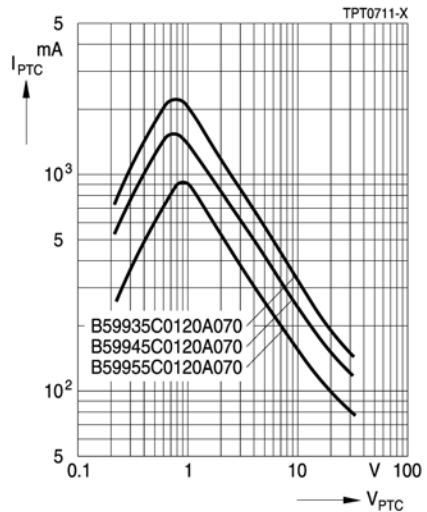
Test	Standard	Test conditions	$ \Delta R_{25}/R_{25} $
Electrical endurance, cycling	IEC 60738-1	Room temperature, I_{Smax} ; V_{max} Number of cycles: 100	< 25%
Electrical endurance, constant	IEC 60738-1	Storage at $V_{max}/T_{op,max}$ (V_{max}) Test duration: 1000 h	< 25%
Damp heat	IEC 60738-1	Temperature of air: 40 °C Relative humidity of air: 93% Duration: 56 days Test according to IEC 60068-2-78	< 10%
Rapid change of temperature	IEC 60738-1	$T_1 = T_{op,min}$ (0 V), $T_2 = T_{op,max}$ (0 V) Number of cycles: 5 Test duration: 30 min Test according to IEC 60068-2-14, Test Na	< 10%
Vibration	IEC 60738-1	Frequency range: 10 to 55 Hz Displacement amplitude: 0.75 mm Test duration: 3 × 2 h Test according to IEC 60068-2-6, Test Fc	< 5%
Shock	IEC 60738-1	Acceleration: 390 m/s ² Pulse duration: 6 ms; 6 × 4000 pulses	< 5%
Climatic sequence	IEC 60738-1	Dry heat: $T = T_{op,max}$ (0 V) Test duration: 16 h Damp heat first cycle Cold: $T = T_{op,min}$ (0 V) Test duration: 2 h Damp heat 5 cycles Tests performed according to IEC 60068-2-30	< 10%

Characteristics (typical)

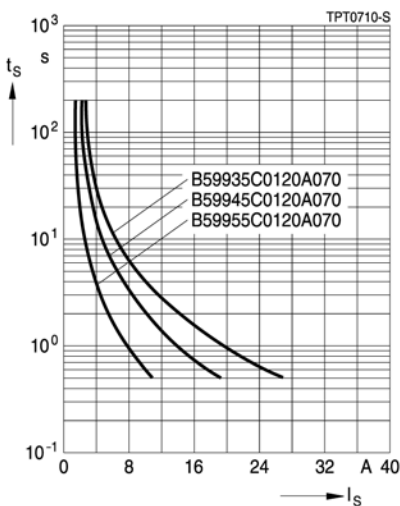
PTC resistance R_{PTC} versus
PTC temperature T_{PTC}
(measured at low signal voltage)



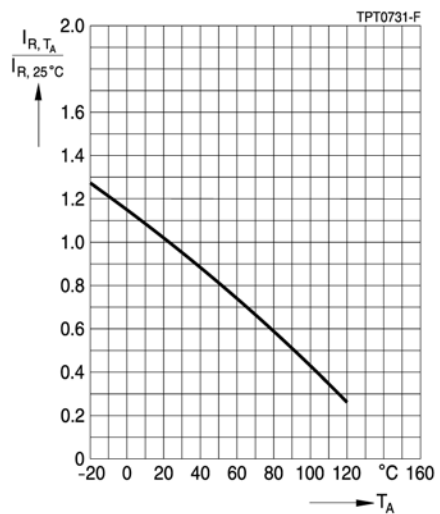
PTC current I_{PTC} versus PTC voltage V_{PTC}
(measured at 25 °C in still air)



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

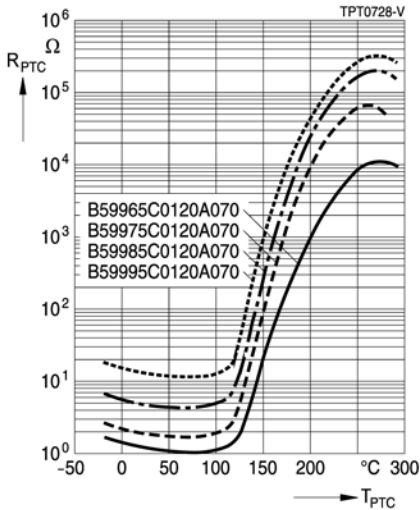


Rated current I_R versus ambient temperature T_A
(measured in still air)

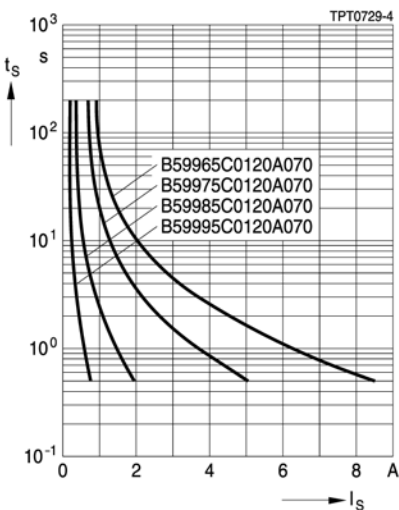


Characteristics (typical)

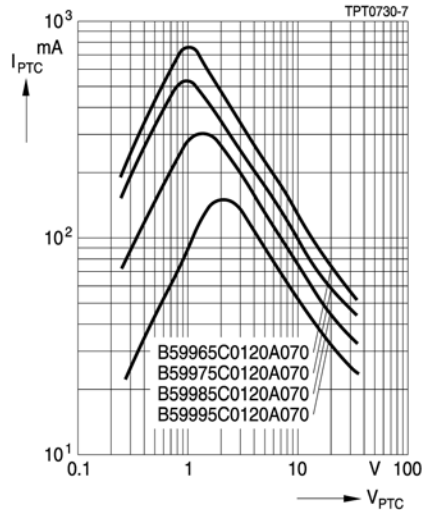
PTC resistance R_{PTC} versus
PTC temperature T_{PTC}
(measured at low signal voltage)



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_R versus ambient temperature T_A
(measured in still air)

