

984-425 to 504

Inrush Current Limiting

B57237
S 237

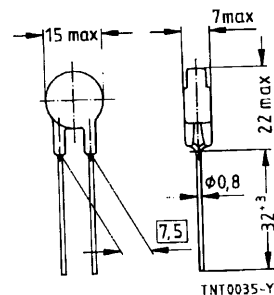
Replacement for S 234

Applications

- Switch-mode power supplies
- Soft-start motors, e.g. in vacuum cleaners

Features

- Useable in series connections up to 265 V_{rms}
- Coated thermistor disk
- Kinked leads of tinned, nickel-plated copper wire
- Wide resistance range
- Available on tape
- UL approval (E69802)



Dimensions in mm
Approx. weight 2 g

Options

Resistance tolerance < 20 % available on request

Lower/upper category temperature	$P_{\max}$	- 55/+ 170	°C
Max. power at 25 °C	$\Delta R/R_N$	3,1	W
Resistance tolerance	T_N	± 20 %	
Rated temperature	δ_{th}	25	°C
Dissipation factor (in air)	τ_c	approx. 17	mW/K
Thermal cooling time constant (in air)	C_{th}	approx. 90	s
Heat capacity		approx. 1530	mJ/K

Type	R_{25} Ω	$I_{\max}$ (25 °C) A	$R_{\min}$ Ω	C_T ¹⁾ μF	Parameters for $R(I)$ ¹⁾		Ordering code
					k	n	
S 237/1,0/M	1,0	9,0	0,04	700	0,622	- 1,27	B57237-S109-M
S 237/2,2/M	2,2	7,0	0,06	700	0,806	- 1,30	B57237-S229-M
S 237/2,5/M	2,5	6,5	0,07	700	0,843	- 1,30	B57237-S259-M
S 237/4,7/M	4,7	5,1	0,12	700	1,03	- 1,32	B57237-S479-M
S 237/5,0/M	5,0	5,0	0,12	700	1,05	- 1,32	B57237-S509-M
S 237/7,0/M	7,0	4,2	0,17	700	1,16	- 1,33	B57237-S709-M
S 237/10/M	10	3,7	0,22	700	1,29	- 1,34	B57237-S100-M
S 237/15/M	15	3,0	0,34	700	1,49	- 1,33	B57237-S150-M
S 237/22/M	22	2,8	0,39	700	1,57	- 1,37	B57237-S220-M
S 237/33/M	33	2,5	0,50	900	1,78	- 1,37	B57237-S330-M

¹⁾ For details on the capacitance C_T as well as on the parameters k and n refer to pages 38-40.

Inrush Current Limiting

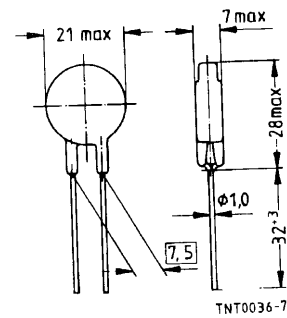
B57364
S 364

Applications

- Switch-mode power supplies
- Soft-start motors, e.g. in vacuum cleaners

Features

- Useable in series connections up to 265 V_{rms}
- Coated thermistor disk
- Kinked leads of tinned, nickel-plated copper wire
- Wide resistance range
- Available on tape
- UL approval (E69802)



Dimensions in mm
Approx. weight 4 g

Options

Resistance tolerance < 20 % available on request

Lower/upper category temperature	P_{max}	- 55/+ 170	°C
Max. power at 25 °C	$\Delta R/R_N$	5,1	W
Resistance tolerance	T_N	± 20 %	
Rated temperature	$\Delta B/B$	25	°C
B value tolerance	δ_{th}	± 3 %	
Dissipation factor (in air)	τ_c	approx. 24	mW/K
Thermal cooling time constant (in air)	C_{th}	approx. 100	s
Heat capacity		approx. 2400	mJ/K

Type	R_{25} Ω	I_{max} (0 ... 65 °C) A	No. of R/T char- acteristic	$B_{25/100}$ K	C_T 1) μF	Parameters für $R(I)$ 1) k n		Ordering code
S 364/1,0/M	1,0	16,0	1202	2800	1000	0,766	- 1,30	B57364-S109-M
S 364/2,0/M	2,0	12,0	1203	2900	1000	0,966	- 1,32	B57364-S209-M
S 364/2,5/M	2,5	11,0	1203	2900	1000	1,04	- 1,32	B57364-S259-M
S 364/4,0/M	4,0	9,5	1308	3060	1000	1,20	- 1,34	B57364-S409-M
S 364/5,0/M	5,0	8,5	1308	3060	1000	1,29	- 1,34	B57364-S509-M
S 364/10/M	10	7,5	1304	3300	1000	1,55	- 1,37	B57364-S100-M

1) For details on the capacitance C_T as well as on the parameters k and n refer to [pages 38–40](#).

Inrush Current Limiting

B57464
S 464

Applications

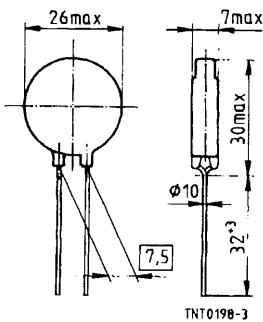
- Switch-mode power supplies
- Soft-start motors, e.g. in vacuum cleaners

Features

- Useable in series connections up to 265 V_{rms}
- Coated thermistor disk
- Kinked leads of tinned, nickel-plated copper wire
- High energy absorption capability

Options

Additional resistance ratings and tolerances < 20 % available on request



Dimensions in mm
Approx. weight 9 g

Lower/upper category temperature		- 55/+ 170	°C
Max. power at 25 °C	P_{max}	6,7	W
Resistance tolerance	$\Delta R/R_N$	± 20 %	
Rated temperature	T_N	25	°C
B value tolerance	$\Delta B/B$	± 3 %	
Dissipation factor (in air)	δ_{th}	approx. 30	mW/K
Thermal cooling time constant (in air)	τ_c	approx. 130	s
Heat capacity	C_{th}	approx. 3900	mJ/K

Type	R_{25} Ω	I_{max} (0 ... 65 °C) A	No. of R/T char- acteristic	$B_{25/100}$ K	C_T 1) μF	Parameters für R(I) 1) k n	Ordering code
S 464/1,0/M	1,0	20	1202	2800	2500	0,886 - 1,30	B57464-S109-M

1) For details on the capacitance C_T as well as on the parameters k and n refer to [pages 38–40](#).

Inrush Current Limiting S 153 ... S 464

Reliability data – ICL

Test	Standard	Test conditions	$\Delta R_{25}/R_{25}$ (typical)	Remarks
Storage in dry heat	IEC 68-2-2	Storage at upper category temperature $T: 170\text{ °C}$ $t: 1000\text{ h}$	< 10 %	No visible damage
Storage in damp heat, steady state	IEC 68-2-3	Temperature of air: 40 °C Relative humidity of air: 93 % Duration: 21 days	< 5 %	No visible damage
Rapid temperature cycling	IEC 68-2-14	Lower test temperature: –55 °C Upper test temperature: 170 °C Number of cycles: 5	< 10 %	No visible damage
Endurance		$I = I_{\max}$ Duration: 1000 h	< 10 %	No visible damage
Cyclic endurance		$I = I_{\max}$, 1000 cycles On-time = 1 min Cooling time = 6 min	< 10 %	No visible damage