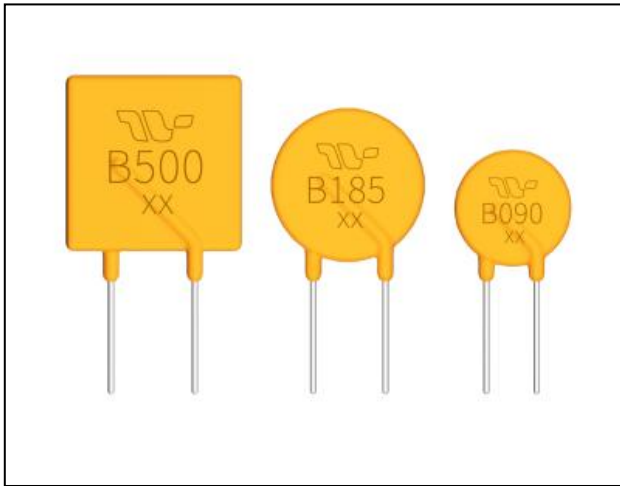


TRB(30V) Series



Applications

Almost anywhere there is a low voltage power supply, up to 30V and a load to be protected, including:

- ◆ Personal computer
- ◆ Toys
- ◆ Industrial controls

Features

- ◆ Radial Leaded Devices
- ◆ Cured, flame retardant epoxy polymer insulating material meets UL 94V-0 requirements
- ◆ Bulk Package, or tape and reel available on most models
- ◆ Agency recognition: TUV on approval

Agency Approvals

AGENCY	AGENCY FILE NUMBER
	R 50322003

Regulation/Standard

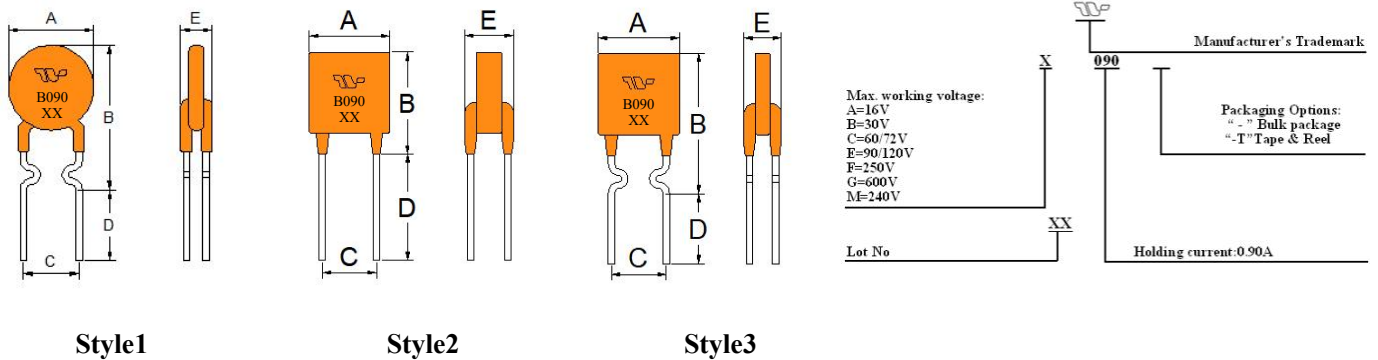


Electrical Characteristics (电气特性)

P/N	保持电流	跳脱电流	最大电压	最大电流	最大动作时间		消耗功率	电阻范围(Ω)		
	I_H (A)	I_T (A)	V_{max} (V)	I_{max} (A)	(A)	(Sec.)	Pd_{typ} (W)	R_{min}	R_{max}	$R1_{max}$
TRB050	0.50	1.00	30	40	2.50	4.0	0.75	0.500	0.790	1.200
TRB090	0.90	1.80	30	40	4.50	5.9	0.60	0.090	0.230	0.300
TRB110	1.10	2.20	30	40	5.50	6.6	0.70	0.060	0.160	0.260
TRB120	1.20	2.40	30	40	6.00	6.5	0.70	0.050	0.115	0.255
TRB135	1.35	2.70	30	40	6.75	7.3	0.80	0.040	0.095	0.170
TRB160	1.60	3.20	30	40	8.00	8.0	0.90	0.030	0.095	0.160
TRB185	1.85	3.70	30	40	9.25	8.7	1.00	0.030	0.070	0.110
TRB200	2.00	4.00	30	40	8.00	8.7	1.00	0.020	0.050	0.110
TRB220	2.20	4.40	30	40	11.0	8.7	1.00	0.020	0.070	0.110
TRB250	2.50	5.00	30	40	12.5	10.3	1.20	0.020	0.048	0.072
TRB300	3.00	6.00	30	40	15.0	10.8	2.00	0.015	0.050	0.075
TRB400	4.00	8.00	30	40	20.0	12.7	2.50	0.010	0.030	0.045
TRB500	5.00	10.00	30	40	25.0	14.5	3.00	0.008	0.025	0.045
TRB600	6.00	12.00	30	100	30.0	16.0	3.50	0.005	0.020	0.030
TRB700	7.00	14.00	30	100	35.0	17.5	3.80	0.003	0.016	0.025
TRB800	8.00	16.00	30	100	40.0	18.8	4.00	0.004	0.015	0.023
TRB900	9.00	18.00	30	100	40.0	20.0	4.00	0.004	0.010	0.015
TRB1200	12.00	24.00	30	100	60.0	20.0	4.00	0.002	0.010	0.013

- I_H : Holding Current: maximum current at which the device will not trip in 25°C still air.
- I_T : Tripping Current minimum current at which the device will trip in 25°C still air.
- V_{max} : Maximum voltage device can withstand without damage at rated current.
- I_{max} : Maximum fault current device can withstand without damage at rated voltage.
- T_{trip} : Maximum time to trip(s) at assigned current.
- $P_{d\ typ}$: Rated working power.
- R_{min} : Minimum resistance of device prior to trip at 25°C.
- R_{max} : Maximum resistance of device prior to trip at 25°C.
- $R1_{max}$:Maximum resistance of device measured one hour after tripping at 25°C.

Product Dimensions & Marking (Unit: mm) (产品尺寸) :

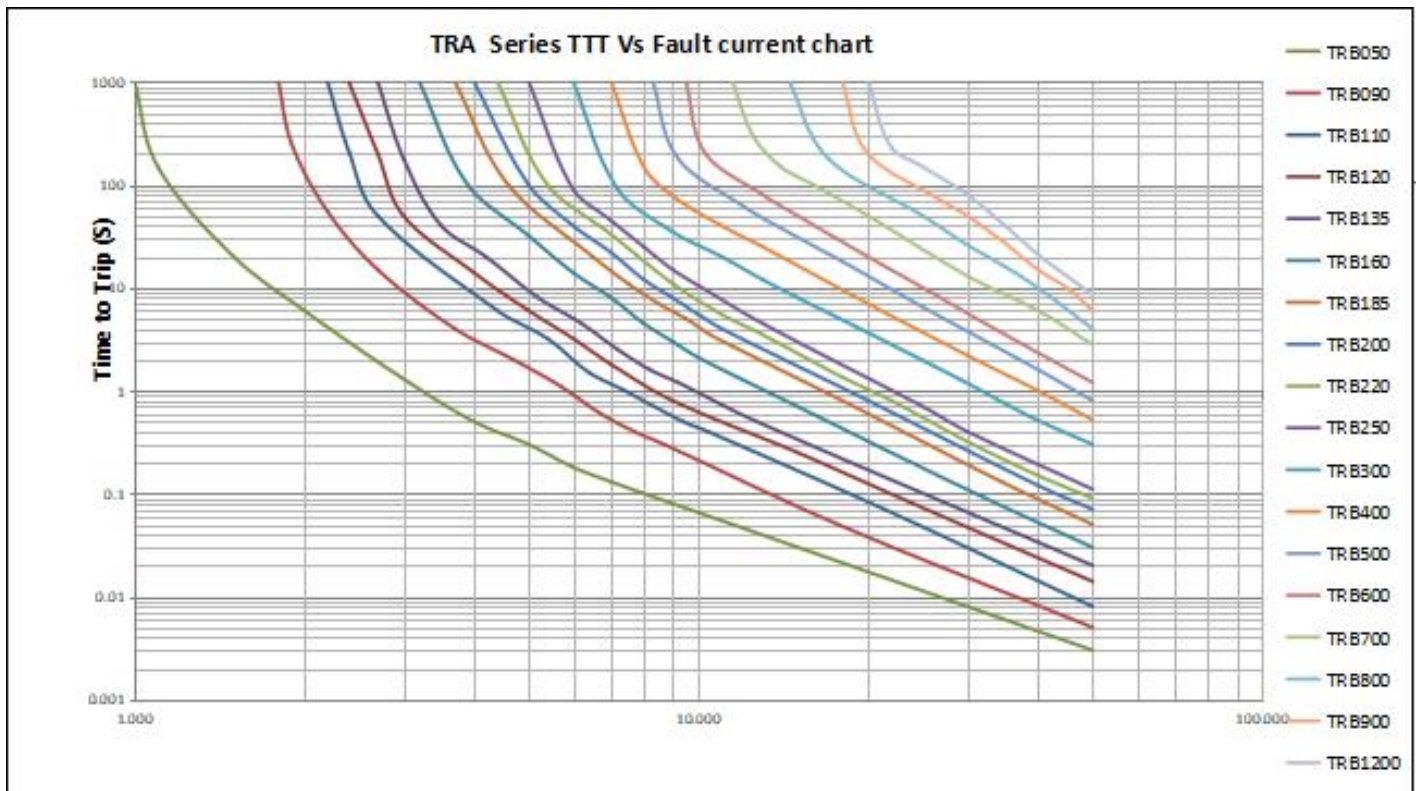


P/N	A	B	C	D	E	Physical Characteristics(物理特性)		
	Max.(最大)	Max.(最大)	Typ.(标准)	Min.(最小)	Max.(最大)	Style(样式)	Lead Φ mm	Material(材料)
TRB050	9.7	15.2	5.1	7.6	3.1	1	0.50	Cp
TRB090	7.4	14.0	5.1	7.6	3.1	3	0.50	Cp
TRB110	10.7	16.7	5.1	7.6	3.1	1	0.50	Cp
TRB120	10.7	16.7	5.1	7.6	3.1	1	0.50	Cp
TRB135	10.7	16.7	5.1	7.6	3.1	1	0.50	Cp
TRB160	11.0	16.8	5.1	7.6	3.1	1	0.60	Cu
TRB185	11.5	17.9	5.1	7.6	3.1	1	0.60	Cu
TRB200	13.0	18.3	5.1	7.6	3.1	3	0.60	Cu
TRB220	13.0	18.3	5.1	7.6	3.1	3	0.60	Cu
TRB250	13.0	18.3	5.1	7.6	3.1	2	0.60	Cu
TRB300	13.0	18.3	5.1	7.6	3.1	2	0.81	Cu
TRB400	16.4	24.8	5.1	7.6	3.1	2	0.81	Cu
TRB500	21.3	26.4	10.2	7.6	3.1	2	0.81	Cu
TRB600	20.8	29.8	10.2	7.6	3.1	2	0.81	Cu
TRB700	20.8	29.8	10.2	7.6	3.1	2	0.81	Cu
TRB800	24.2	32.9	10.2	7.6	3.1	2	0.81	Cu
TRB900	24.2	32.9	10.2	7.6	3.1	2	0.81	Cu
TRB1200	20.8	29.8	10.2	7.6	3.1	2	0.81	Cu

Thermal Derating Chart - I_{hold} (Amps) (环境温度与工作电流关系特性曲线) :

P/N	Ambient Operating Temperature(工作环境温度)								
	-40°C	-20°C	0°C	25°C	40°C	50°C	60°C	70°C	85°C
TRB050	0.78	0.68	0.60	0.50	0.41	0.36	0.32	0.27	0.20
TRB090	1.40	1.22	1.07	0.90	0.73	0.65	0.57	0.49	0.36
TRB110	1.60	1.43	1.27	1.10	0.91	0.85	0.75	0.67	0.57
TRB120	1.75	1.56	1.39	1.20	0.99	0.93	0.82	0.73	0.62
TRB135	1.96	1.76	1.55	1.35	1.12	1.04	0.92	0.82	0.70
TRB160	2.32	2.08	1.84	1.60	1.33	1.23	1.09	0.98	0.83
TRB185	2.68	2.41	2.13	1.85	1.54	1.42	1.26	1.13	0.96
TRB200	2.90	2.60	2.30	2.00	1.65	1.55	1.40	1.20	1.00
TRB220	3.29	2.95	2.61	2.20	1.81	1.70	1.53	1.31	1.09
TRB250	3.63	3.25	2.88	2.50	2.08	1.93	1.70	1.53	1.30
TRB300	4.35	3.90	3.45	3.00	2.49	2.31	2.04	1.83	1.56
TRB400	5.80	5.20	4.60	4.00	3.32	3.08	2.72	2.44	2.08
TRB500	7.25	6.50	5.75	5.00	4.15	3.85	3.40	3.05	2.60
TRB600	8.70	7.80	6.90	6.00	4.98	4.62	4.08	3.66	3.12
TRB700	10.10	9.10	8.05	7.00	5.81	5.39	4.76	4.27	3.64
TRB800	11.60	10.40	9.20	8.00	6.64	6.16	5.44	4.88	4.16
TRB900	13.00	11.70	10.30	9.00	7.47	6.93	6.12	5.49	4.68
TRB1200	17.30	15.60	13.80	12.00	10.00	9.28	8.21	7.39	6.31

Typical time to trip at 25°C (25°C下的动作保护时间曲线表) :

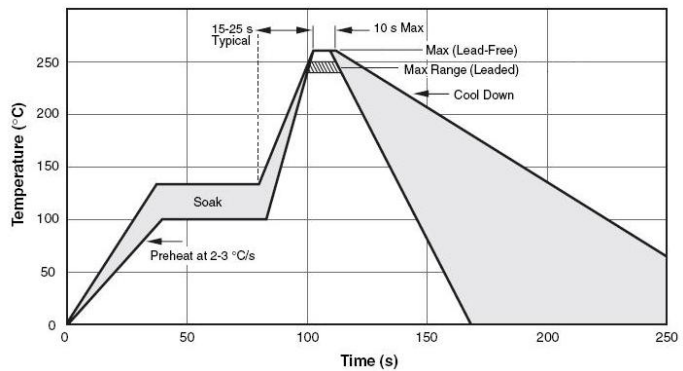


Reliability Requirement (可靠性要求) :

Humidity Aging	85°C, 85%R.H., 1000 Hours ± 15% Typical Resistance Change
Passive Aging	85°C, 1000 Hours ± 15% Typical Resistance Change
Thermal Shock	-40°C ~ 85°C, 10 times ± 15% Typical Resistance Change
Solderability	245°C ± 5°C, 5sec >95% coverage
Resistance to Solvents	MIL-STD-202, Method 215 Marking Still legible

Soldering Parameters

Profile Feature	Condition
Average Ramp-Up Rate (T _{max} to TP)	4°C/second max.
Preheat	
-Temperature Min (T _{min})	100°C
-Temperature Max (T _{max})	125°C
-Time (T _{min} to T _{max})	60-180 seconds
Peak Temperature (TP)	265°C
Max Time at Peak Temperature (tP)	5 seconds
Ramp-Down Rate	6 °C /second max.
Time 25°C to Peak Temperature	5 minutes max.
Storage Condition	0°C ~ 35°C, ≦ 70%RH, 2 Years



Environmental Characteristics (环境特性) :

- Operating/Storage Temperature -40 °C to +85 °C
- Maximum Device Surface Temperature in Tripped State 125 °C
- Storage Conditions +40 °C Max. 70% RH Max. Packed in original packaging.

Package information (包装信息) :

Model	Q'ty/bag
TRB090-TRB220	1000 pcs
TRB250-TRB400	500 pcs
TRB500-TRB1200	200 pcs

- Tape and Reel Specifications
 Devices taped using EIA468-B/IEC286-2 standards.