

STS series

Strap resettable PTC Device



Feature

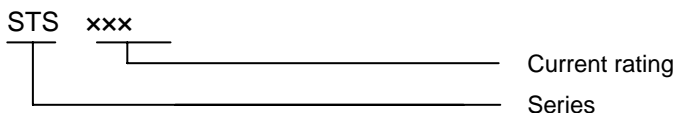
- Resettable overcurrent protection
- ROHS complaint
- Strap devices with Low resistance
- Fast time-to-trip



Application

- Mobile phone battery packs
- Cordless phone battery packs
- Mobile radio packs
- Computer battery packs
- Camcorder battery packs
- PDA battery packs

Part Numbering



Typical Electrical Characteristics for STS series at Room Temperature

STS series (1)

Part number	Hold Current & Trip Current (Amps)		Maximum Voltage (V)	Maximum Current (A)	Maximum Time-to-Trip		Minimum Resistance (Ohms)	Maximum Resistance (Ohms)	Tripped State Power Dissipation (Watts)
	Hold	trip			(A)	(S)			
STS120	1.2	2.7	15	100	6.0	5.0	0.085	0.160	0.8
STS170	1.7	3.4	15	100	8.5	5.0	0.044	0.078	0.8
STS175	1.75	3.8	15	100	8.75	5.0	0.050	0.090	0.9
STS200	2.0	4.4	30	100	10.0	4.0	0.030	0.060	1.6
STS260	2.6	5.8	15	100	13.0	5.0	0.020	0.042	1.0
STS350	3.5	6.3	30	100	20.0	3.0	0.017	0.031	1.9
STS380	3.8	8.3	15	100	19.0	5.0	0.013	0.026	1.2
STS420	4.2	7.6	30	100	20.0	6.0	0.012	0.024	2.2
STS450	4.5	8.9	20	100	22.5	5.0	0.011	0.020	1.4
STS550	5.5	10.5	20	100	27.5	5.0	0.009	0.016	2.0
STS600	6.0	11.7	20	100	30.0	5.0	0.007	0.014	1.7
STS730	7.3	14.1	20	100	30.0	5.0	0.006	0.012	1.9
STS880	8.8	16.0	20	100	44.0	5.0	0.0065	0.0105	2.0
STS900	9.0	16.7	20	100	45.0	5.0	0.006	0.010	3.0

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STS1300	13.0	21.2	20	100	50.0	10.0	0.004	0.007	2.2
STS1410	14.1	26.2	20	100	70.0	5.0	0.003	0.005	2.2

STS series (2)

Part number	Hold Current & Trip Current (Amps)		Maximum Voltage (V)	Maximum Current (A)	Maximum Time-to-Trip		Minimum Resistance (Ohms)	Maximum Resistance (Ohms)	Tripped State Power Dissipation (Watts)
	Hold	trip			(A)	(S)			
STS070	0.7	1.45	15	100	3.5	5.0	0.100	0.200	0.7
STS100	1.0	2.50	24	100	5.0	7.0	0.070	0.130	0.9
STS180	1.8	3.80	24	100	9.0	2.9	0.040	0.068	1.0
STS190	1.9	4.20	24	100	10.0	3.0	0.030	0.057	1.9
STS260	2.6	5.20	24	100	13.0	5.0	0.025	0.042	1.3
STS300	3.0	6.30	24	100	15.0	4.0	0.015	0.031	1.7
STS340	3.4	6.80	24	100	17.0	5.0	0.016	0.027	1.6

Thermal Derating For STS series [Hold Current (A) at Ambient Temperature(°C)]

STS series (1)

Part number	Maximum Ambient Temperature									
	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	85°C
STS120	1.9	1.7	1.5	1.2	1.17	1.0	0.9	0.8	0.6	0.4
STS170	2.5	2.2	2.0	1.7	1.64	1.4	1.3	1.2	1.0	0.8
STS175	2.5	2.2	2.0	1.75	1.68	1.4	1.3	1.2	1.0	0.8
STS200	3.1	2.8	2.5	2.0	1.97	1.7	1.5	1.4	1.2	0.9
STS260	3.8	3.4	3.1	2.6	2.54	2.2	2.0	1.9	1.7	1.3
STS350	5.3	4.8	4.3	3.5	3.44	3.0	2.7	2.5	2.1	1.7
STS380	5.4	4.9	4.4	3.8	3.64	3.3	3.0	2.8	2.5	2.1
STS420	6.3	5.7	5.1	4.2	4.11	3.6	3.3	3.0	2.6	2.1
STS450	6.5	5.8	5.3	4.5	4.38	3.9	3.6	3.3	2.9	2.4
STS550	7.6	6.9	6.2	5.5	5.32	4.7	4.3	4.0	3.6	3.0
STS600	8.7	7.8	7.1	6.0	5.86	5.2	4.7	4.4	3.9	3.2
STS730	10.5	9.5	8.6	7.3	7.13	6.3	5.7	5.4	4.7	4.0
STS880	12.3	11.0	9.8	8.8	8.3	7.4	6.8	6.2	5.5	4.5
STS900	12.7	11.4	10	9.0	8.5	7.5	6.8	6.2	5.5	4.5
STS1300	17.9	16.2	14.5	13.0	12.4	11.1	10.3	9.5	8.6	7.2
STS1410	19.9	17.8	15.7	14.1	13.3	11.8	10.8	9.7	8.7	7.2

STS series (2)

Maximum Ambient Temperature										
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Part number	Maximum Ambient Temperature									
	-40°C	-20°C	0°C	20°C	25°C	40°C	50°C	60°C	70°C	85°C
STS070	1.1	1.0	0.8	0.7	0.65	0.5	0.4	0.3	0.2	0.1
STS100	1.8	1.6	1.4	1.0	0.99	0.8	0.7	0.6	0.4	0.2
STS180	3.1	2.6	2.2	1.8	1.67	1.3	1.1	0.9	0.6	0.3
STS190	3.3	2.8	2.4	1.9	1.79	1.4	1.2	1.1	0.7	0.4
STS260	4.3	3.7	3.1	2.6	2.42	1.9	1.6	1.4	1.1	0.6
STS300	5.1	4.4	3.7	3.0	2.82	2.3	1.9	1.6	1.2	0.7
STS340	5.5	4.7	4.0	3.4	3.17	2.6	2.2	1.9	1.5	0.9

Product Dimensions in Millimeters

STS series (1)

Part number	A		B		C		D		E		F	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
STS120	19.9	22.1	0.6	1.0	4.9	5.2	5.5	7.5	5.5	7.5	3.9	4.1
STS170	19.0	21.0	0.5	0.7	3.8	4.0	5.3	6.5	5.3	6.5	3.9	4.1
STS175	20.9	23.1	0.6	1.0	4.9	5.2	4.1	5.5	4.1	5.5	2.9	3.1
STS200	21.3	23.4	0.5	1.1	10.2	11.0	5.0	7.6	5.0	7.6	3.9	4.1
STS260	20.9	23.1	0.6	1.0	4.9	5.5	4.1	5.5	4.1	5.5	4.8	5.4
STS350	28.4	31.8	0.5	1.1	13.0	13.5	6.3	8.9	6.3	8.9	3.9	4.1
STS380	24.0	26.0	0.6	1.0	6.9	7.5	4.1	5.5	4.1	5.5	6.0	6.6
STS420	30.6	32.4	0.5	1.1	12.9	13.6	5.0	7.5	5.0	7.5	4.9	5.1
STS450	24.0	26.0	0.6	1.0	9.9	10.5	5.3	6.7	5.3	6.7	6.0	6.7
STS550	35.0	37.0	0.6	1.0	6.9	7.5	5.3	6.7	5.3	6.7	5.9	6.1
STS600	24.0	26.0	0.6	1.0	13.9	14.5	4.1	5.5	4.1	5.5	4.9	5.1
STS730	27.1	29.1	0.6	1.0	13.9	14.5	4.1	5.5	4.1	5.5	5.9	6.1
STS880	62.8	65.2	0.6	1.0	7.9	8.5	10.0	12.0	10.0	12.0	5.9	6.1
STS900	45.4	47.6	0.9	1.3	7.9	8.5	4.6	6.2	4.6	6.2	5.9	6.1
STS1300	61.5	66.5	0.9	1.3	9.4	10.0	5.0	7.5	5.0	7.5	5.9	6.1
STS1410	58.0	60.0	0.9	1.3	13.4	14.0	4.2	5.8	4.2	5.8	5.9	6.1

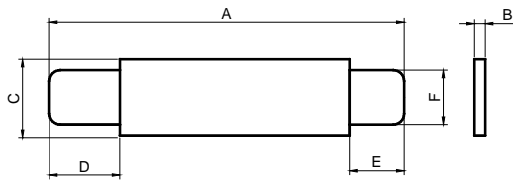
STS series (2)

Part number	A		B		C		D		E		F	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
STS070	19.9	22.1	0.7	1.2	4.9	5.2	5.5	7.5	5.5	7.5	3.9	4.1
STS100	20.9	23.1	0.6	1.0	4.9	5.2	4.1	5.5	4.1	5.5	3.9	4.1
STS180	24.0	26.0	0.6	1.0	4.9	5.2	4.1	5.5	4.1	5.5	3.9	4.1

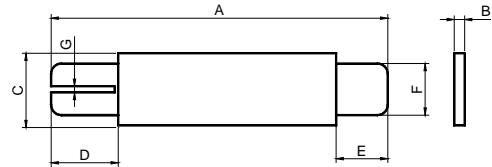
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STS190	21.3	23.4	0.5	1.1	10.2	11.0	5.0	7.6	5.0	7.6	4.8	5.4
STS260	24.0	26.0	0.6	1.0	10.8	11.9	5.0	7.0	5.0	7.0	5.9	6.1
STS300	28.4	31.8	0.5	1.1	13.0	13.5	6.3	8.9	6.3	8.9	6.0	6.6
STS340	24.0	26.0	0.6	1.0	14.8	15.9	4.0	5.0	4.0	5.0	5.9	6.1



Style 1



Style 2

Typical Time-to-trip Curves at Room Temperature

STS series (1)

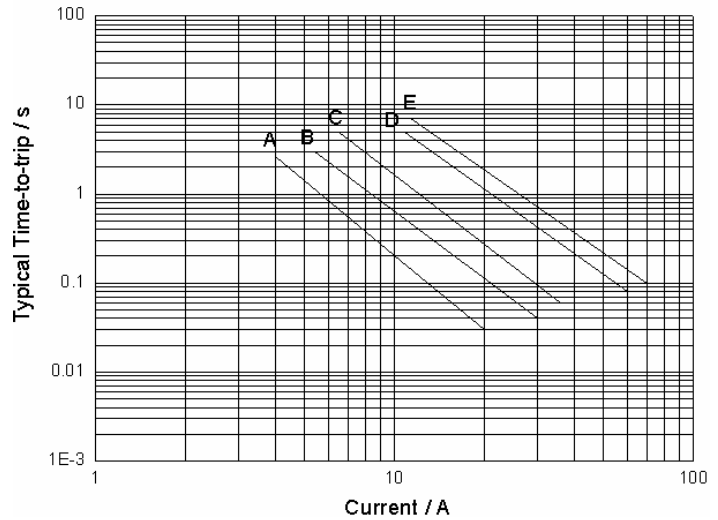
A=STS120

B=STS175

C=STS200

D=STS350

E=STS420



A=STS170

B=STS260

C=STS380

D=STS450

E=STS550

F=STS600

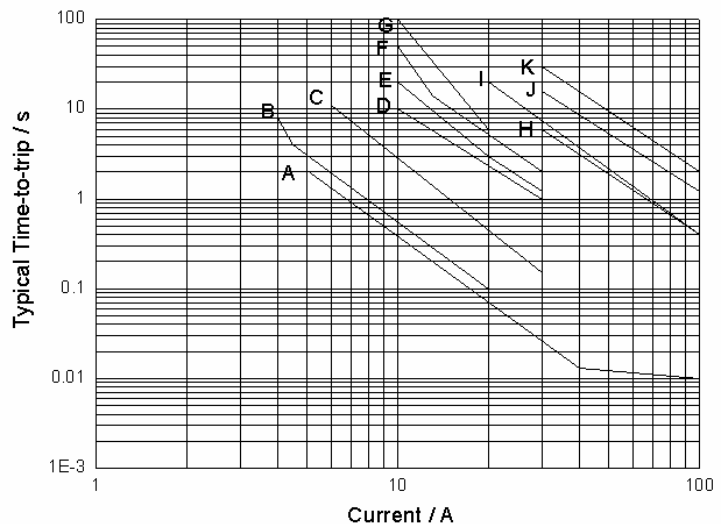
G=STS730

H=STS880

I=STS900

J=STS1300

K=STS1410



STS series (2)

A=STS070

B=STS100

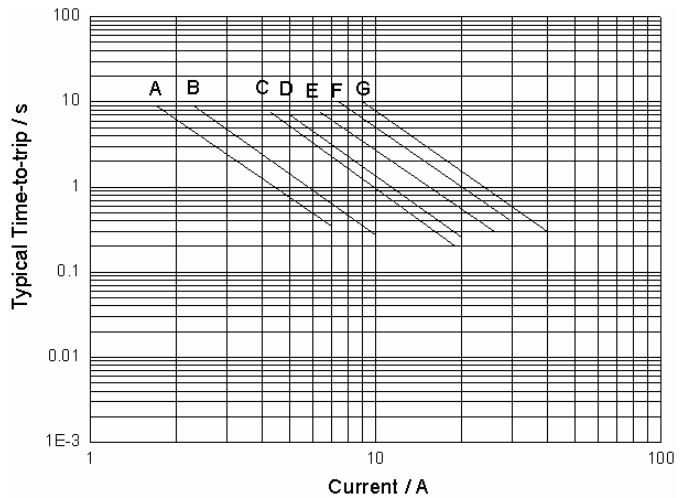
C=STS180

D=STS190

E=STS260

F=STS300

G=STS340



Physical Characteristics and Environmental Specifications

Physical Characteristics

Lead material	0.125mm nominal thickness, quarter-hard nickel
Tape material	Polyester

Environmental Specifications

Test	Conditions	Resistance Change
Passive aging	-40°C, 1000hours	±5%
	70°C, 1000hours	±20%
Humidity aging	60°C/95% RH, 1000hours	±30%
Thermal shock	85°C/-40°C, 10cycles	±5%
Vibration	MIL-STD-883D ,Method 2026	No change

Packaging and Storage

Packaging: Bulk, 1000pcs per bag

Storage: The maximum ambient temperature shall not exceed 40°C. Storage temperatures higher than 40°C could result in the deformation of packaging materials. The maximum relative humidity recommended for storage is 70%. High humidity with high temperature can accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components. Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use. The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.



WARNING:

- Operation beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- The devices are intended for protection against occasional overcurrent or overtemperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.

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- Contamination of the PPTC material with certain silicon based oils or some aggressive solvents can adversely impact the performance of the devices.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal and mechanical procedures for electronic components.
- Operation in circuit with a large inductance can generate a circuit voltage ($L di/dt$) above the rated voltage of the resettable device.