

NTC Surge Protectors / Inrush Current Limiters

Thermistors

SP 系列

ROHS series 



Part Number Code.

Example :

$\frac{N}{(1)}$ $\frac{20}{(2)}$ $\frac{SP}{(3)}$ $\frac{005}{(4)}$ $\frac{\square}{(5)}$ - $\frac{5}{(6)}$ $\frac{\square\square}{(7)}$

(1) NTC. (Negative Temperature Coefficient)

(2) Nominal Diameter :

08	:	8mm	10	:	10mm
13	:	13mm	15	:	15mm
20	:	20mm			

(3) SP : Surge Protection

(4) Resistance of 25°C

0R7	:	0.7Ω	1R3	:	1.3Ω
2R5	:	2.5Ω	003~008	:	3~8Ω
120	:	120Ω	010~080	:	0~80Ω

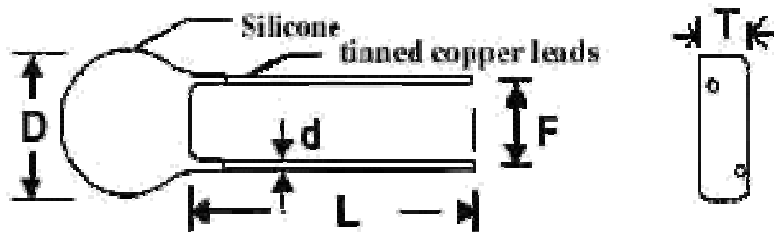
(5) Tolerance of Resistance

L	:	±15%
M	:	±20%

(6) Lead free(ROHS)

(7) Forming Type (Kink)

DIMENSION



FORMING SPECIFICATIONS

Disc Φ	Dmax	Lmin	d	F	Tmax
8	9.5	25	0.8±0.02	5.0±1.0	5
10	11.5	25	0.8±0.02	5.0±1.0	5
13	15	25	1.0±0.02	7.5±1.0	6
15	17	25	1.0±0.02	7.5±1.0	6
20	22	25	1.0±0.02	7.5±1.0	6
25	27	25	1.0±0.02	7.5±1.0	6

unit : mm

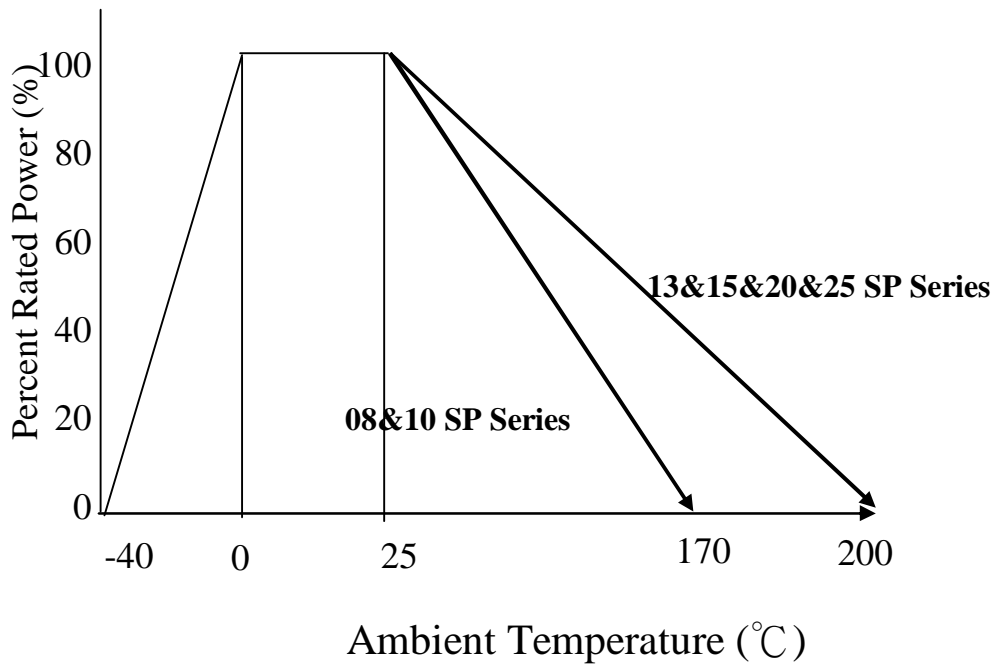
SPECIFICATIONS

Nominal Diameter(mm)	Part No.	Zero power Resistance at 25°C (Ohms)	Max Steady State Current(Amps)	Thermal Time Constant(S ec.)	Thermal Dissipation Constant(mW/°C)	Max. Steady Power (w)	Operating temperature range (°C)	UL	VDE
8	08SP003 - 5	3	3	48	12	1.7	-40~+170		
	08SP004 - 5	4	3	45					
	08SP005 - 5	5	3	48				.	.
	08SP006 - 5	6	3	45				.	.
	08SP008 - 5	8	3	45				.	.
	08SP010 - 5	10	3	45				.	.
	08SP012 - 5	12	3	45					
	08SP015 - 5	15	2	45				.	.
	08SP020 - 5	20	2	45					
	08SP022 - 5	22	2	45					
	08SP033 - 5	33	2	45					
10	N10SP001 - 5	1	5	65	16	2.3	-40~+170		
	N10SP1R3 - 5	1.3	5	63					
	N10SP1R5 - 5	1.5	5	60					
	N10SP002 - 5	2	5	55					
	N10SP2R5 - 5	2.5	5	58				.	.
	N10SP003 - 5	3	5	60				.	.
	N10SP004 - 5	4	4	62				.	.
	N10SP005 - 5	5	4	58				.	.
	N10SP006 - 5	6	3	59				.	.
	N10SP007 - 5	7	3	60				.	.
	N10SP008 - 5	8	3	59				.	.
	N10SP010 - 5	10	3	56				.	.
	N10SP012 - 5	12	2	58				.	.
	N10SP015 - 5	15	2	62					
	N10SP016 - 5	16	2	62				.	.
	N10SP020 - 5	20	2	60				.	.
	N10SP025 - 5	25	2	56				.	.
	N10SP050 - 5	50	2	58				.	.
N10SP080 - 5	80	1	55	.	.				
N10SP120 - 5	120	1	60	.	.				

13	N13SP1R3 - 5	1.3	7	91	17	3.0	-40~+200		
	N13SP1R5 - 5	1.5	7	92					
	N13SP2R5 - 5	2.5	6	85					
	N13SP003 - 5	3	5	93					
	N13SP004 - 5	4	5	91					
	N13SP005 - 5	5	5	93				.	.
	N13SP006 - 5	6	3	59					
	N13SP007 - 5	7	3	60					
	N13SP008 - 5	8	4	91				.	.
	N13SP010 - 5	10	4	87				.	.
	N13SP012 - 5	12	4	82					
	N13SP016 - 5	16	3	87				.	.
	N13SP018 - 5	18	3	92					
	N13SP020 - 5	20	3	93					
15	N15SP1R3 - 5	1.3	8	107	20	3.5	-40~+200	.	.
	N15SP1R5 - 5	1.5	8	107				.	.
	N15SP2R5 - 5	2.5	8	104				.	.
	N15SP003 - 5	3	7	105				.	.
	N15SP004 - 5	4	6	104				.	.
	N15SP005 - 5	5	6	110				.	.
	N15SP006 - 5	6	5	102				.	.
	N15SP007 - 5	7	5	99				.	.
	N15SP008 - 5	8	5	103				.	.
	N15SP010 - 5	10	5	103				.	.
	N15SP012 - 5	12	4	102				.	.
	N15SP015 - 5	15	4	101				.	.
	N15SP016 - 5	16	4	102				.	.
	N15SP020 - 5	20	4	101				.	.
	N15SP022 - 5	22	4	107					
	N15SP025 - 5	25	3	100				.	.
	N15SP040 - 5	40	3	101				.	.
	N15SP047 - 5	47	3	102				.	.
	N15SP055 - 5	55	3	102					
N15SP080 - 5	80	2.5	102	.	.				
N15SP120 - 5	120	2	104	.	.				
20	N20SP0R7 - 5	0.7	12	145	23	4.0	-40~+200	.	
	N20SP001 - 5	1	10	160					
	N20SP1R3 - 5	1.3	8	144				.	
	N20SP002 - 5	2	8	140					
	N20SP2R5 - 5	2.5	8	120					
	N20SP004 - 5	4	8	135					
	N20SP005 - 5	5	7	144				.	
	N20SP006 - 5	6	6	136				.	
	N20SP007 - 5	7	6	132					
	N20SP010 - 5	10	6	135				.	
	N20SP012 - 5	12	5	132				.	
	N20SP020 - 5	20	6	127					
	N20SP033 - 5	33	3	128					
	N20SP120 - 5	120	2	142				.	

25	N25SP001 - 5	1	15	150	30	5	-40~+200		
	N25SP1R5 - 5	1.5	15	150					
	N25SP002 - 5	2	15	150					
	N25SP2R5 - 5	2.5	15	150					
	N25SP003 - 5	3	15	150					
	N25SP004 - 5	4	14	150					
	N25SP4R7 - 5	4.7	13	150					
	N25SP005 - 5	5	12	150					
	N25SP6R8 - 5	6.8	10.5	150					
	N25SP007 - 5	7	10	150					
	N25SP008 - 5	8	9	150					
	N25SP010 - 5	10	8	150					
	N25SP012 - 5	12	7.5	150					
	N25SP015 - 5	15	6.5	150					
	N25SP018 - 5	18	5.5	150					
	N25SP020 - 5	20	5	150					
N25S9120 - 5	120	3	150						

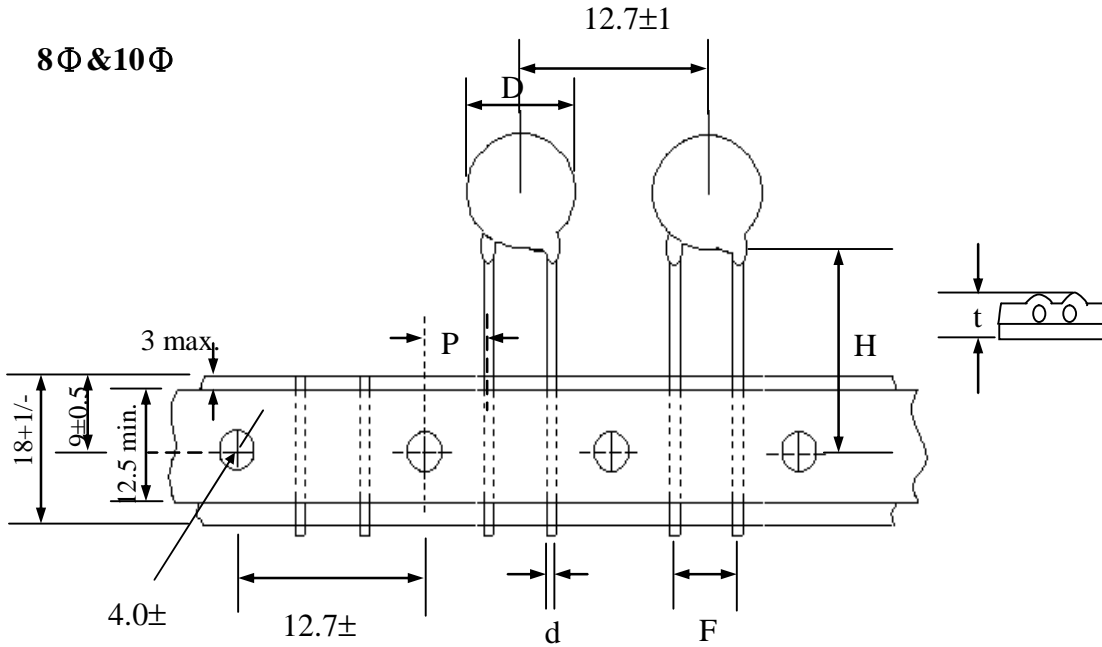
Maximum. power rating(Pmax)



Packaging

◎Taping Specifica

8Φ & 10Φ



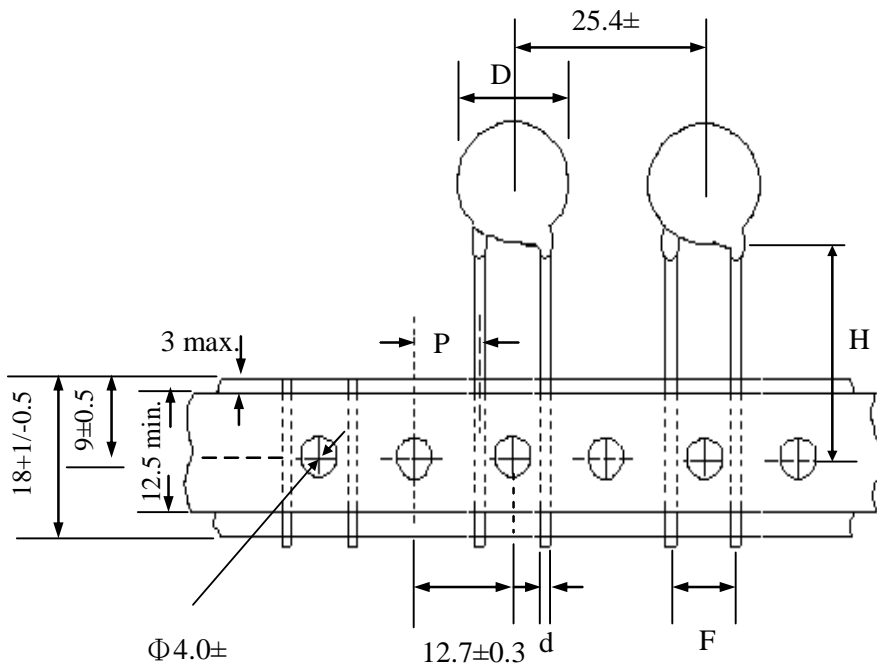
TA SERIES

Φ	Dmax.	F±1	Tmax.	d±0.02	P1±1	H±1.5	t	A	B	C
8	9.5	5.0	5.0	0.8	3.85	18	1.7	330	260	50
10	11.5	5.0	5.0	0.8	3.85	18	1.7	330	260	50

TR SERIES

Φ	Dmax.	F±1	Tmax.	d±0.02	P1±1	H0±1	t	A±2	B±2	C±5	E
8	9.5	5.0	5.0	0.8	3.85	18	1.7	31	76	340	55
10	11.5	5.0	5.0	0.8	3.85	18	1.7	31	76	340	55

13Φ & 15Φ & 20Φ



TA SERIES

Φ	Dmax.	F \pm 1	Tmax.	d \pm 0.02	P1 \pm 1	H \pm 1.5	t	A	B	C
13	15.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50
15	17.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50
20	22.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50

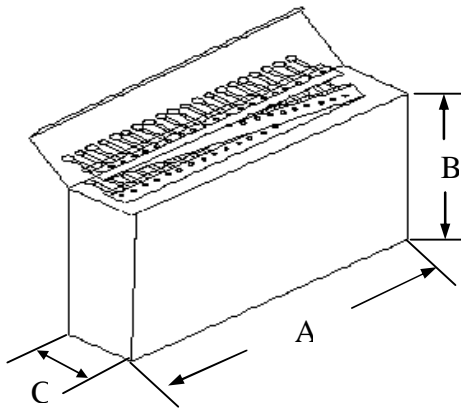
TR SERIES

Φ	Dmax.	F \pm 1	Tmax.	d \pm 0.02	P1 \pm 1	H0 \pm 1	t	A \pm 2	B \pm 2	C \pm 5	E
13	15.0	7.5	6.0	1.00	8.95	18	1.9	31	76	340	55
15	17.0	7.5	6.0	1.00	8.95	18	1.9	31	76	340	55
20	22.0	7.5	6.0	1.00	8.95	18	1.9	31	76	340	55

Quantity

TA SERIES

AMMO Packing

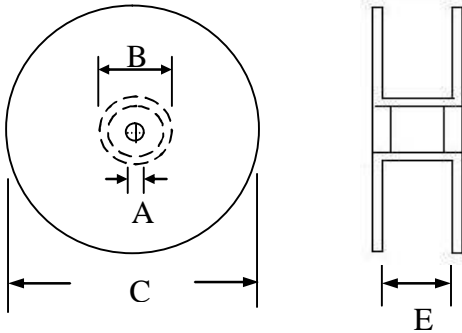


Disc size/mm	Quantity(PCS/BOX)
8 Φ	1000
10 Φ	1000
13 Φ	500
15 Φ	500
20 Φ	500

AMMO

TR SERIES

REEL Packing



Disc size/mm	Quantity(PCS/REEL)
8 Φ	1000
10 Φ	1000
13 Φ	500
15 Φ	500
20 Φ	500

REEL

BULK Packing

Disc size/mm	Quantity(PCS/Bag)
8 Φ	200
10 Φ	200
13 Φ	100
15 Φ	100
20 Φ	50
25 Φ	50