



Part Number Code.

Example :

N 20 SP 005 -5 □ □ □
 (1) (2) (3) (4) (5) (6) (7)

(1) NTC. (Negative Temperature Coefficient)

(2) Nominal Diameter :

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

(3) SP : Surge Protection

(4) Resistance of 25°C

0R7 : 0.7Ω; 1R3 : 1.3Ω; 2R5 : 2.5Ω;

003~008 : 3~8Ω; 010~080 : 10~80Ω; 120 : 120Ω

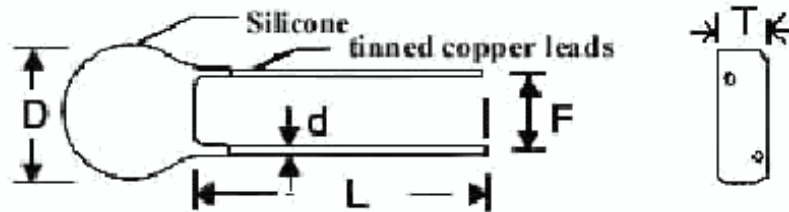
(5) Tolerance of Resistance

L : ± 15% ; M: ± 20%

(6) Lead free (ROHS)

(7) Forming Type (Kink)

DIMENSION



FORMING SPECIFICATIONS

Unit: mm

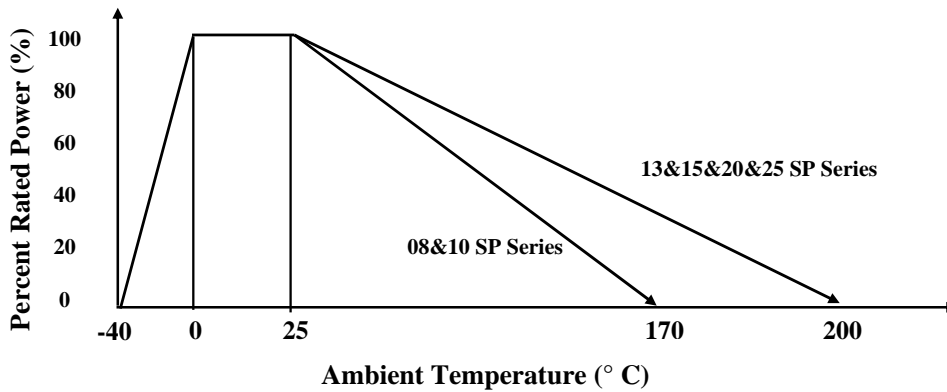
DiscΦ	D _{max}	L _{min}	d	F	T _{max}
8	9.5	25	0.8 ± 0.02	5.0 ± 1.0	5
10	11.5	25	0.8 ± 0.02	5.0 ± 1.0	5
13	15	25	1.0 ± 0.02	7.5 ± 1.0	6
15	17	25	1.0 ± 0.02	7.5 ± 1.0	6
20	22	25	1.0 ± 0.02	7.5 ± 1.0	6
25	27	25	1.0 ± 0.02	7.5 ± 1.0	6

SPECIFICATIONS

Nominal Diameter (mm)	Part No.	Zero power Resistance at 25°C (Ohms)	Max Steady State Current (Amps)	Thermal Time Constant (Sec.)	Thermal Dissipation Constant (mW/°C)	Max. Steady Power (w)	Operating temperature range (°C)	UL	CSA	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	·	·	·				

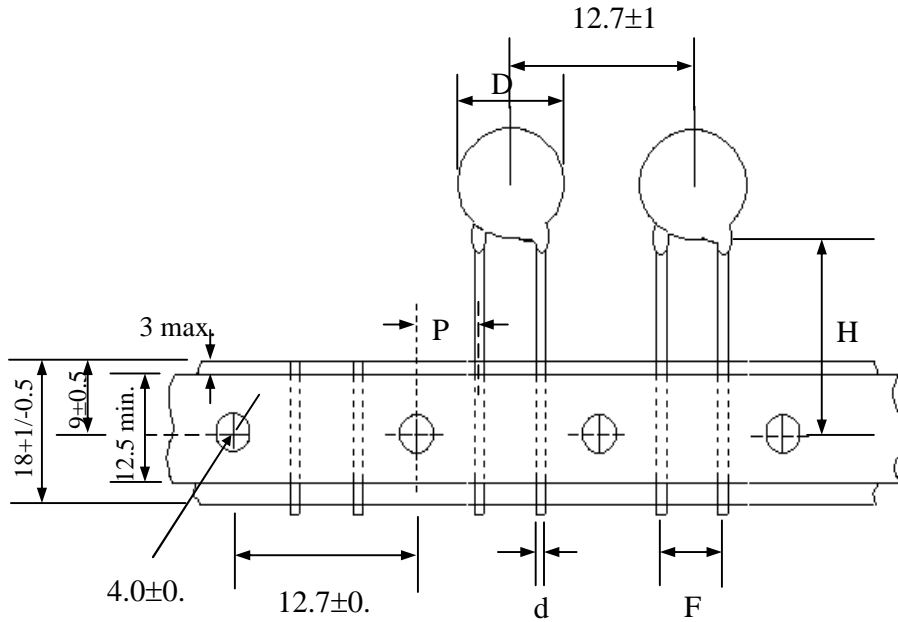
Maximum power rating (P_{max})



Packaging

◎Taping Specifics

8Φ&10Φ



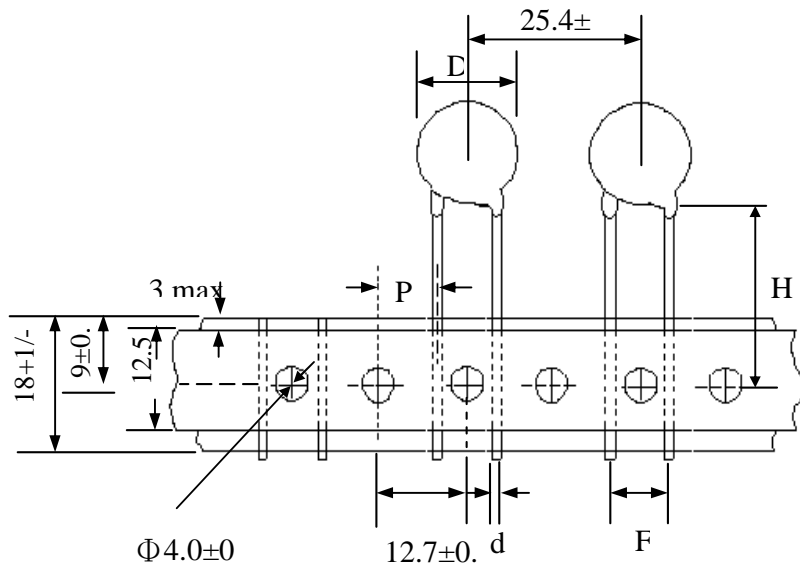
TA SERIES

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

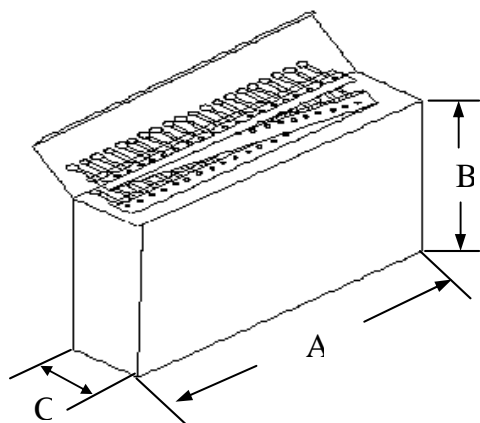
Φ	Dmax.	F ± 1	Tmax.	d ± 0.02	P1 ± 1	H ± 1.5	t	A	B	C
13	15.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50
15	17.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50
20	22.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50

TR SERIES

Φ	Dmax.	F ± 1	Tmax.	d ± 0.02	P1 ± 1	H0 ± 1	t	A ± 2	B ± 2	C ± 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

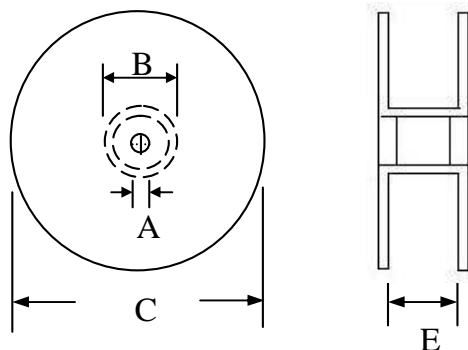


AMMO

AMMO Packing

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

TR SERIES



REEL

REEL Packing

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

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