



### Part Number Code.

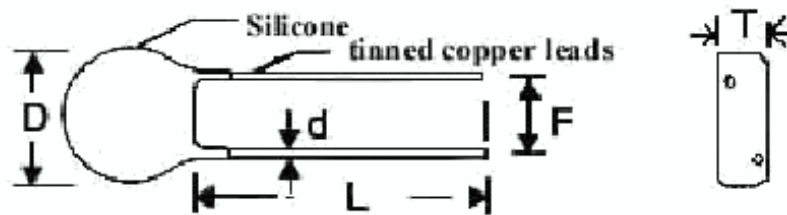
#### Example :

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

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### FORMING SPECIFICATIONS

Unit: mm

DiscΦ	D <sub>max</sub>	L <sub>min</sub>	d	F	T <sub>max</sub>
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

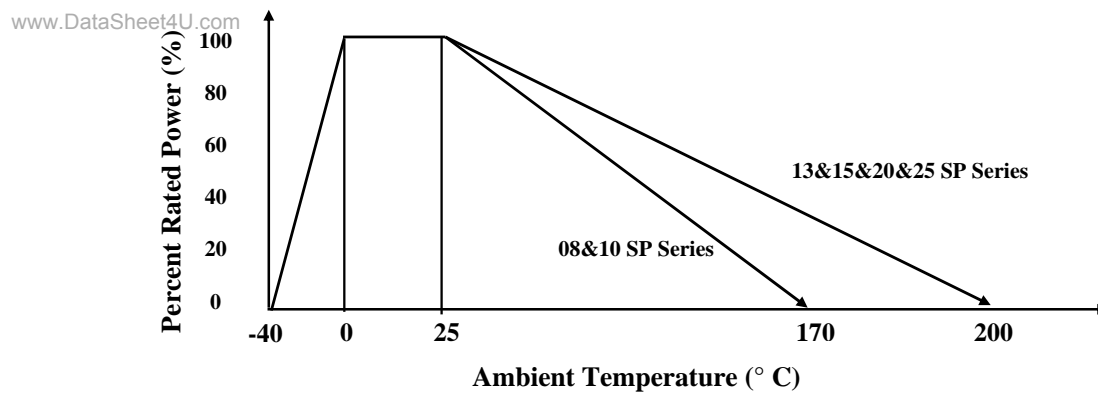
SPECIFICATIONS

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	⊙	⊙	⊙				

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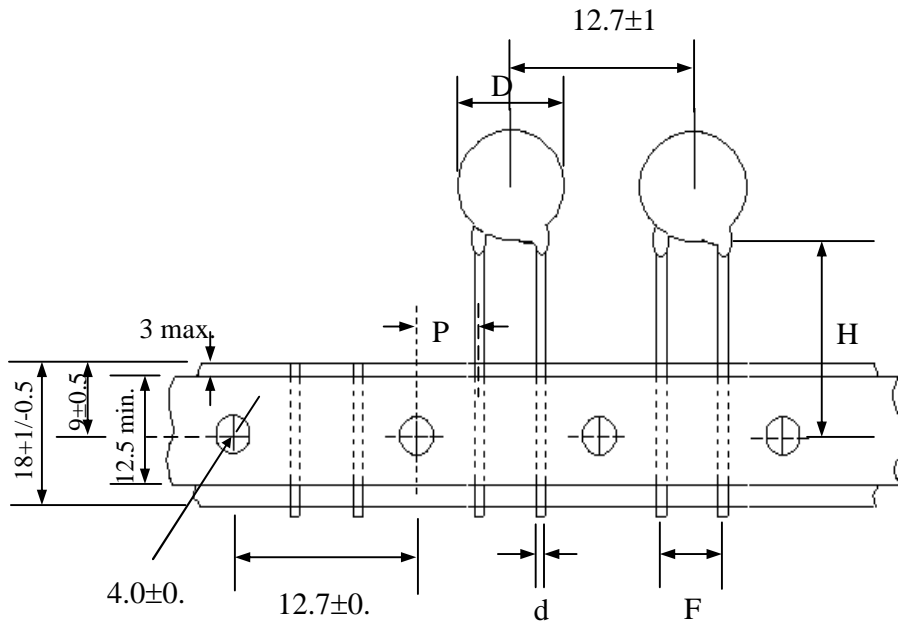
20	N20SP0R7 - 5	0.7	12	145	23	4.0	-40~+200	⊙	⊙	.
	N20SP001 - 5	1	10	160				⊙	⊙	.
	N20SP1R3 - 5	1.3	8	144				.	.	.
	N20SP002 - 5	2	8	140				.	.	.
	N20SP2R5 - 5	2.5	8	120				.	.	.
	N20SP004 - 5	4	8	135				.	.	.
	N20SP005 - 5	5	7	144				⊙	⊙	.
	N20SP006 - 5	6	6	136				⊙	⊙	.
	N20SP007 - 5	7	6	132				.	.	.
	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 ( $P_{max}$ )



◎Taping Specifics

8Φ&10Φ

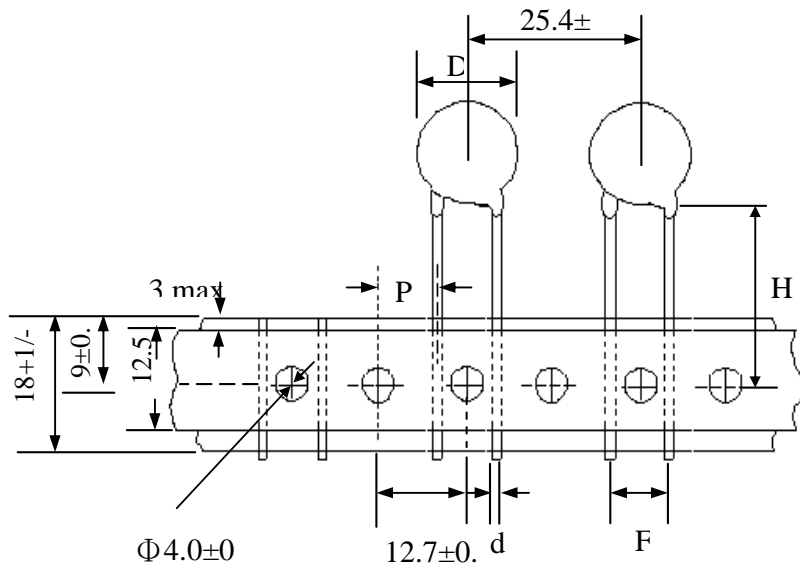


TA SERIES

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



**TA SERIES**

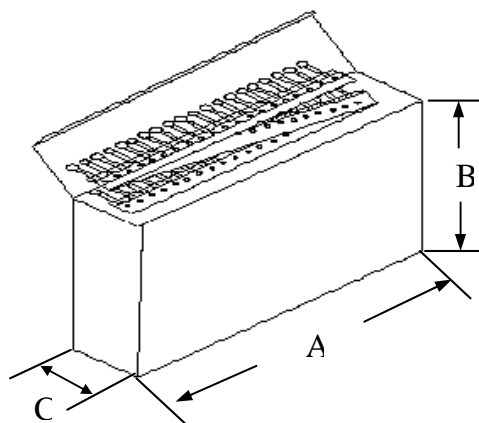
$\Phi$	Dmax.	F $\pm 1$	Tmax.	d $\pm 0.02$	P1 $\pm 1$	H $\pm 1.5$	t	A	B	C
13	15.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50
15	17.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50
20	22.0	7.5	6.0	1.00	8.95	18	1.9	330	260	50

**TR SERIES**

$\Phi$	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

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**TA SERIES**

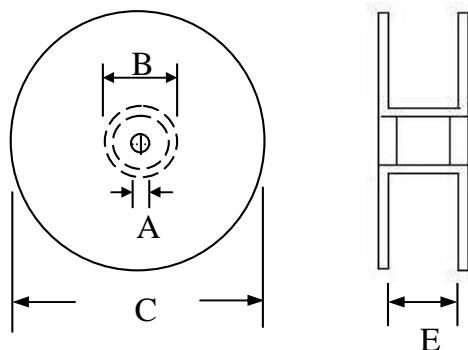


**AMMO Packing**

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

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**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