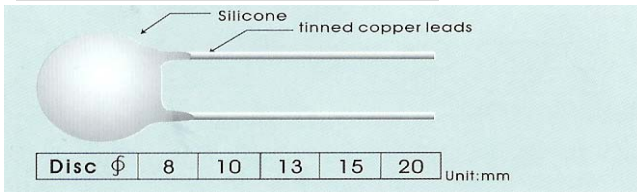


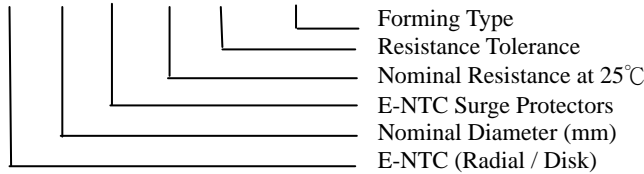
# SP/NP Series



NTC SRUGE PROTECTORS of ceramic material are made from specially formulated metal oxides. The application of NTC (Negative Temperature Coefficient) SURGE PROTECTORS limits the current to a low value at Turn on for protection against extremely high peak inrush current in AC/DC power supplies etc.

## PART NUMBER CODE

ENR 20 NP 005 □ - □ □

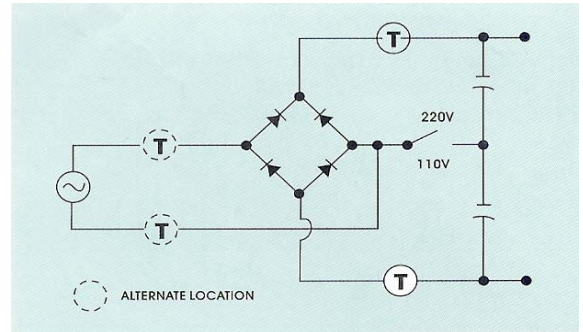


## NP Series

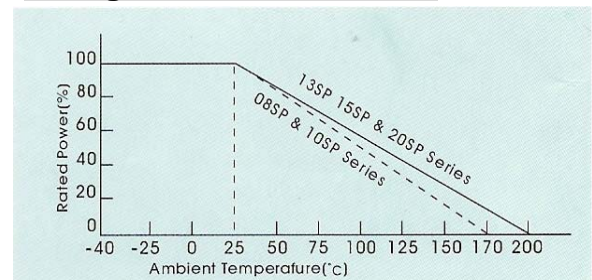
Resistance Tolerance: L= ±15% ; M= ±20%

Nominal Diameter (mm)	Part No.	No Load Resistance at 25°C (Ohms)	Max. Steady State Current (Amps)	(25°C Ambient) Approx. Resistance at Max. Current (Ohms)	Thermal Dissipation Constant (mW/°C)	Thermal Time Constant (Sec)
5	ENR-NP01	5	2	0.325	7	35
	ENR-NP02	10	1	1.116	7	35
	ENR-NP41	10	3	0.450	7	35
	ENR-NP42	12	1	1.250	7	35
8	ENR-NP19	5	4	0.182	9	48
	ENR-NP45	15	3	0.320	12	45
10	ENR-NP27	8	4	0.194	12	59
	ENR-NP18	10	4	0.182	12	56
	ENR-NP21	12	3	0.316	11	58
	ENR-NP37	15	3	0.301	11	62
	ENR-NP11	16	3	0.303	11	62
	ENR-NP39	50	2	0.372	10	58
13	ENR-NP12	3	7	0.170	18	85
	ENR-NP08	5	6	0.120	17	93
	ENR-NP13	7	5	0.083	19	80
	ENR-NP31	8	5	0.171	15	91
	ENR-NP14	10	5	0.155	14	87
	ENR-NP05	16	4	0.250	15	87
15	ENR-NP32	2.5	9	0.063	20	104
	ENR-NP24	5	7	0.098	20	110
	ENR-NP07	7	8	0.140	21	99
	ENR-NP36	8	6	0.142	15	103
	ENR-NP06	10	6	0.145	19	103
	ENR-NP25	40	4	0.342	20	101
20	ENR-NP44	1	12	0.024	28	160
	ENR-NP34	2.5	10	0.058	24	120
	ENR-NP35	5	10	0.068	24	144
	ENR-NP23	10	8	0.120	23	135

## APPLICATION CIRCUITS



## Rating Curves of NP Series



**SP Series**

Nominal Diameter (mm)	Part No.	No Load Resistance at 25°C (Ohms)	Max. Steady State Current (Amps)	(25°C Ambient) Approx. Resistance at Max. Current (Ohms)	Thermal Dissipation Constant (mW/°C)	Thermal Time Constant (Sec)
8	ENR08SP003	3	3	0.230	12	48
	ENR08SP004	4	3	0.237	12	45
	ENR08SP005	5	3	0.227	9	48
	ENR08SP006	6	3	0.234	9	45
	ENR08SP008	8	3	0.250	9	45
	ENR08SP010	10	3	0.260	9	45
	ENR08SP015	15	2	0.530	12	45
	ENR08SP020	20	2	0.555	12	45
	ENR08SP022	22	2	0.590	12	45
10	ENR10SP001	1	5	0.090	17	65
	ENR10SP1R5	1.5	5	0.120	15	60
	ENR10SP002	2	5	0.099	12	55
	ENR10SP2R5	2.5	5	0.102	11	58
	ENR10SP003	3	5	0.106	11	60
	ENR10SP004	4	4	0.163	10	62
	ENR10SP005	5	4	0.168	10	58
	ENR10SP006	6	3	0.250	10	59
	ENR10SP007	7	3	0.262	13	60
	ENR10SP008	8	3	0.265	12	59
	ENR10SP010	10	3	0.273	12	56
	ENR10SP012	12	2	0.504	11	58
	ENR10SP015	15	2	0.500	11	62
	ENR10SP016	16	2	0.501	11	62
	ENR10SP020	20	2	0.557	12	60
	ENR10SP025	25	2	0.555	12	56
	ENR10SP050	50	2	0.723	10	58
	ENR10SP080	80	1	1.742	10	55
	ENR10SP120	120	1	2.335	10	60
	13	ENR13SP1R3	1.3	7	0.065	15
ENR13SP2R5		2.5	6	0.094	16	85
ENR13SP003		3	5	0.131	16	93
ENR13SP004		4	5	0.139	16	91
ENR13SP005		5	5	0.150	17	93
ENR13SP008		8	4	0.207	15	91
ENR13SP010		10	4	0.211	14	87
ENR13SP012		12	4	0.227	18	82
ENR13SP016		16	3	0.367	15	87
ENR13SP018		18	3	0.391	15	92
ENR13SP020		20	3	0.430	17	93
ENR15SP1R3		1.3	8	0.059	20	107
15		ENR15SP1R5	1.5	8	0.064	19
	ENR15SP2R5	2.5	8	0.070	20	104
	ENR15SP003	3	7	0.089	20	105
	ENR15SP004	4	6	0.115	18	104
	ENR15SP005	5	6	0.122	20	110
	ENR15SP006	6	5	0.160	20	102
	ENR15SP007	7	5	0.188	21	99
	ENR15SP008	8	5	0.186	15	103
	ENR15SP010	10	5	0.182	19	103
	ENR15SP012	12	4	0.252	21	102
	ENR15SP015	15	4	0.260	17	101
	ENR15SP016	16	4	0.285	22	102
	ENR15SP020	20	4	0.292	20	101
	ENR15SP022	22	4	0.303	17	107
	ENR15SP025	25	3	0.482	21	100
	ENR15SP033	33	3	0.490	18	102
	ENR15SP040	40	3	0.496	20	101
	ENR15SP047	47	3	0.517	21	102
	ENR15SP055	55	3	0.534	21	102
	ENR15SP080	80	2.5	0.748	22	102
20	ENR15SP120	120	2	1.159	20	104
	ENR20SP0R7	0.7	12	0.039	25	145
	ENR20SP001	1	10	0.051	28	160
	ENR20SP1R3	1.3	8	0.064	24	144
	ENR20SP002	2	8	0.072	21	140
	ENR20SP2R5	2.5	8	0.073	23	120
	ENR20SP004	4	8	0.087	25	135
	ENR20SP005	5	7	0.107	24	144
	ENR20SP006	6	6	0.156	24	136
	ENR20SP007	7	6	0.156	24	132
	ENR20SP010	10	6	0.158	23	135
	ENR20SP012	12	5	0.209	25	132
ENR20SP020	20	6	0.197	22	127	
ENR20SP120	120	2	1.222	24	142	