NTC THERMISTOR OF NSP POWER-TYPE SERIES SPECIFICATION

Outline :

Asurge current of a remarkable value will occur with no doubt at the brief moment when the current is key-on in an electronic circuit incorporating capacitors,heaters or motors.The peak value of this surge current can be very high although the surge current only works for a short time.The surge current can be as higher as 100 times the working current in a converting power,switch power or a UPS power.so,there must be an efficient way to bring down this surge current.A NTC thermistor of NSP Power-type is a semi-conductive ceramic component made from a transitional metal oxide as a major material , and is classified under the category of negative temperature thermistors.When a current is applied directly to a NTC thermistor of power-type , the resistance goes down in response as the thermistor is heating up.Thanks to the pre-set Zero-power resistance of the NTC thermistor of power-type,it can be bring down effectively the surge current while it is connected in parallel in the power loop . Besides, the constant impact produced by the passing current makes the resistance of a NTC thermistor of power-type go down to its minimum after the bring -down is completed.Its power dissipation is ignorable since it produces no impact to the normal working current.Here comes the conclusion----to bring down the turn-on surge current and thus keep safe of your electronic devices,the simplest and the most efficient way is to equip the power loop with a NTC thermistor of NSP power-type.

Application：

Converting power, switch power, UPS power , electric heating devices of all types, electronic energy-saving lamps, electronic ballasts, power circuits of electronic appliances of all kinds, color picture tubes, incandescent bulbs and other illuminating lamps.

Features：

① Small in size, high-powered, and very capable of bringing down the surge current;

② Quick in reaction ;

③ High in B value and low in residual current ;

④ Long service life and high reliability ;

⑤ High coefficient of safety and wide range of application.

Part NO.：

	11	N	SP	05	M
①	②	③	④	⑤	⑥

① Logo of the MFR ② Diameter of chip
③ NTC Thermistor ④ Surge-arrestor
⑤ Rated Resistance ⑥ Range of Resistance tolerance

Code (Diameter of chip)	A	B	C	D	E①	F	G②	H②
20NSP	MAX22	MIN25	7.5±1/10±1	MAX7	1.0	MAX4	28±3.5	MIN4.5
15NSP	16.5	25	7.5±1/10±1	6	1.0	4	24±3.5	4.5
13NSP	14.5	25	7.5±1	6	0.8	4	22±3.0	4.5
11NSP	12.5	25	5±1	5	0.8	4	20±2.0	3.0
9NSP	10.5	25	5±1	5	0.6	4	18±2.0	3.0

Remarks:

①"E" value may be 0.6 for resistors for which the chip's diameter is ≤φ13and the working current is ≤2A， E can adapt 0.6.

② "G" column and "H" column stand for bend dimensions of the lead.

Specification

Model	R_{25}±20% (Ω)	Max Current (A)	Approximate Resistant with Max Current At 25℃(Ω)	Power Dissipation (mW/℃)	Time Constant (S)	Working temperatura (℃)
9NSP03	3	4	0.12	11	35	-55~+200
9NSP04	4	3	0.19	11	35	
9NSP05	5	3	0.21	11	34	
9NSP06	6	2	0.315	11	34	
9NSP08	8	2	0.4	11	32	
9NSP10	10	2	0.458	11	32	
9NSP12	12	1	0.652	11	32	
9NSP16	16	1	0.802	11	31	
9NSP20	20	1	0.864	11	30	
9NSP30	30	1	1.022	11	30	
9NSP50	50	1	1.252	11	30	
9NSP80	80	0.8	2.01	11	30	
11NSP2R5	2.5	5	0.095	13	43	
11NSP03	3	5	0.1	13	43	
11NSP04	4	4	0.15	13	44	
11NSP05	5	4	0.156	13	45	
11NSP06	6	3	0.24	13	45	
11NSP08	8	3	0.255	13.5	47	
11NSP10	10	3	0.275	14	47	
11NSP12	12	2	0.426	14	48	
11NSP16	16	2	0.47	14	50	
11NSP20	20	2	0.512	15	52	
11NSP30	30	1.5	0.667	15	52	
11NSP50	50	1.5	1.021	15	51	
11NSP80	80	1.2	1.656	15	51	
13NSP1R3	1.3	7	0.062	13	60	
13NSP1R5	1.5	7	0.073	13	60	
13NSP2R5	2.5	6	0.088	13	60	
13NSP03	3	6	0.092	14	60	
13NSP04	4	5	0.12	15	67	
13NSP05	5	5	0.125	15	68	
13NSP06	6	4	0.17	15	65	

Model	R_{25}±20% (Ω)	Max Current (A)	Approximate Resistant with Max Current At 25℃(Ω)	Power Dissipation (mW/℃)	Time Constant (S)	Working temperature (℃)
13NSP07	7	4	0.188	15	65	-55~ +200
13NSP08	8	4	0.194	15	60	
13NSP10	10	4	0.206	15	65	
13NSP12	12	3	0.316	16	65	
13NSP15	15	3	0.335	16	60	
13NSP16	16	3	0.338	16	60	
13NSP20	20	3	0.372	16	65	
13NSP30	30	2.5	0.517	16	65	
15NSP1R3	1.3	8	0.048	18	68	
15NSP1R5	1.5	8	0.052	19	69	
15NSP2R3	2.5	7	0.07	19	79	
15NSP03	3	7	0.075	18	76	
15NSP04	4	6	0.097	20	76	
15NSP05	5	6	0.112	20	76	
15NSP06	6	5	0.155	20	80	
15NSP07	7	5	0.173	20	80	
15NSP08	8	5	0.178	20	80	
15NSP10	10	5	0.18	20	75	
15NSP12	12	4	0.25	20	75	
15NSP15	15	4	0.268	21	85	
15NSP16	16	4	0.276	21	70	
15NSP20	20	4	0.288	17	86	
15NSP30	30	3.5	0.438	18	75	
20NSP0R7	0.7	12	0.018	25	89	
20NSP1R3	1.3	9	0.037	24	88	
20NSP03	3	8	0.055	24	88	
20NSP05	5	7	0.087	23	87	
20NSP06	6	6	0.113	25	103	
20NSP08	8	6	0.142	25	105	
20NSP10	10	6	0.162	24	102	
20NSP12	12	5	0.195	24	100	
20NSP16	16	5	0.212	25	100	

Remark:

As for NTC thermistor of NSP power-type, chips of φ7、8、10、18、22、25、30 and 35(for the diameter) are also available apart from chips ofφ9、11、13、15 and 20(for the diameter).Please contact with the Sales of our company for further detail if the tables fail to cover any of the chips you require.