

Features

- I Wide operating voltage (V1mA) range from 18V to 750V
- I Fast responding to transient over-voltage.
- I Large absorbing transient energy capability.
- I Low clamping ratio and no following-on current.

General Information

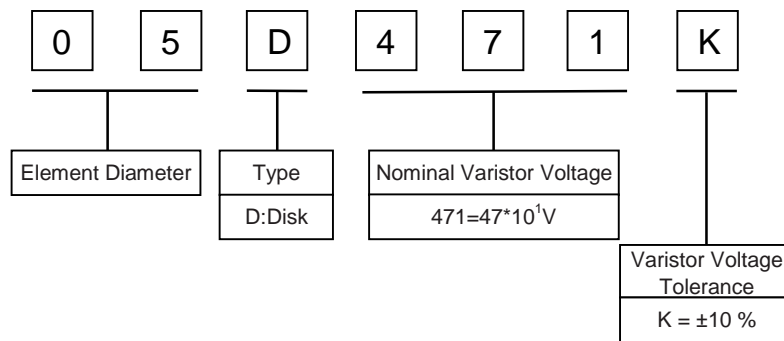
- I Surge protection in consumer electronics
- I Surge protection in industrial electronics
- I Relay and electromagnetic valve surge absorption
- I Transistor, diode, IC, thyristor or triac semiconductor protection
- I Surge protection in electronic home appliances, gas and petroleum appliances



General Characteristics

- I Body: Nickel Plated
- I Devices with No Leads: Nickel Plated
- I Operating Temperature: -40°C to +85°C
- I Storage Temperature: -40 °C to +125°C
- I Axial Devices: Tin Plated

Part Number Code



Electrical Characteristics

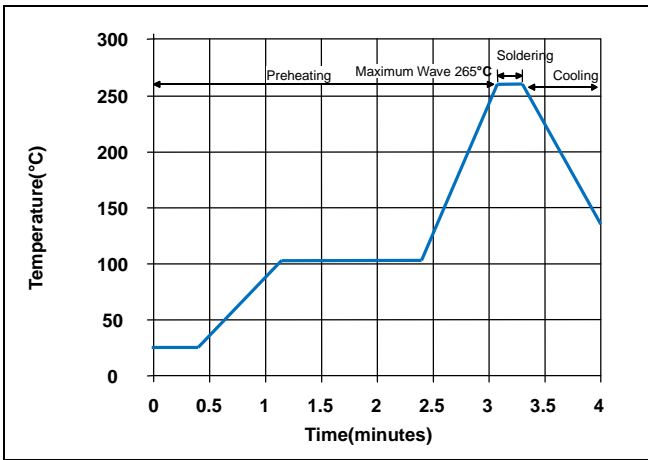
Type Number	Varistor Voltage	Max. Allowable Voltage		Max. Energy (2ms) (J)	Max. Clamping Voltage (8/20µs)		Withstanding Surge Current (8/20µs) (A)	Rated Power (W)	Typical Capacitance (Reference) @1KHz(pf)
		V _{AC} (V)	V _{DC} (V)		I _P (A)	V _C (V)			
05D180K	16~20	11	14	0.3	1	40	100	0.01	2400
05D220K	20~24	14	18	0.4	1	48	100	0.01	1800
05D270K	24~30	17	22	0.5	1	60	100	0.01	1500
05D330K	30~36	20	26	0.6	1	73	100	0.01	1200
05D390K	35~43	25	31	0.7	1	86	100	0.01	1000
05D470K	42~52	30	38	0.8	1	104	100	0.01	850
05D560K	50~62	35	45	1.0	1	123	100	0.01	700
05D680K	61~75	40	56	1.2	1	145	100	0.01	560
05D820K	74~90	50	65	1.5	5	150	400	0.1	480
05D101K	90~110	60	85	1.8	5	175	400	0.1	420
05D121K	108~132	75	100	2.2	5	210	400	0.1	360
05D151K	135~165	95	125	2.7	5	260	400	0.1	280
05D181K	162~198	115	150	3.2	5	320	400	0.1	200
05D201K	180~220	130	170	3.6	5	355	400	0.1	160
05D221K	198~242	140	180	4.0	5	380	400	0.1	110
05D241K	216~264	150	200	4.3	5	415	400	0.1	85
05D271K	243~297	175	225	4.9	5	475	400	0.1	75
05D301K	270~330	195	250	5.4	5	525	400	0.1	75
05D331K	297~363	210	275	5.9	5	575	400	0.1	75
05D361K	324~396	230	300	6.5	5	620	400	0.1	70
05D391K	351~429	250	320	7.0	5	675	400	0.1	70
05D431K	387~473	275	350	7.7	5	745	400	0.1	65
05D471K	423~517	300	385	8.5	5	810	400	0.1	55
05D511K	459~561	320	418	9.2	5	882	400	0.1	55
05D561K	504~616	350	460	10.1	5	968	400	0.1	50
05D621K	558~682	385	505	11.2	5	1072	400	0.1	45
05D681K	612~748	420	560	12.2	5	1176	400	0.1	40
05D751K	675~825	460	615	13.5	5	1300	400	0.1	35

Note: The energy (10/1000µs) is about 1.4 times of energy(2ms)



Soldering Recommendation

Wave Lead Free Soldering Recommendation

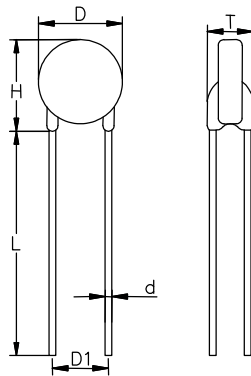


Item	Conditions
Peak Temperature	265°C
Dipping Time	10 seconds (max.)
Soldering	1 time

Recommendation Reworking Conditions with Soldering Iron

Item	Conditions
Temperature of Soldering Iron-tip	360°C (max.)
Soldering Time	3 seconds (max.)
Distance from Varistor	2mm (min.)

Dimensions



Symbol	Millimeters	Inches
H(max)	10.0	0.394
L(min.)	15.0	0.591
D(max)	7.0	0.276
D1(±1.0)	5.0	0.197
T(max.)	TABLE 2	
d(±0.1)	0.6	0.024

Packaging Quantity: 1000pcs/bag

TABLE 2---T(max.)

Model	Millimeters	Inches	Model	Millimeters	Inches
180K~390K	4.0	0.157	331K~391K	6.0	0.236
470K~680K	4.5	0.177	431K~561K	6.5	0.256
820K~151K	5.0	0.197	621K~751K	7.0	0.276
181K~271K	5.5	0.217			

