



# Metal Oxide Varistors

**40D Series**

## Metal Oxide Varistors - 40D Series

### Features

- Wide operating voltage ( $V_{1mA}$ ) range from 200V to 1600V.
- Fast responding to transient over-voltage.
- Large absorbing transient energy capability.
- Low clamping ratio and no following-on current.



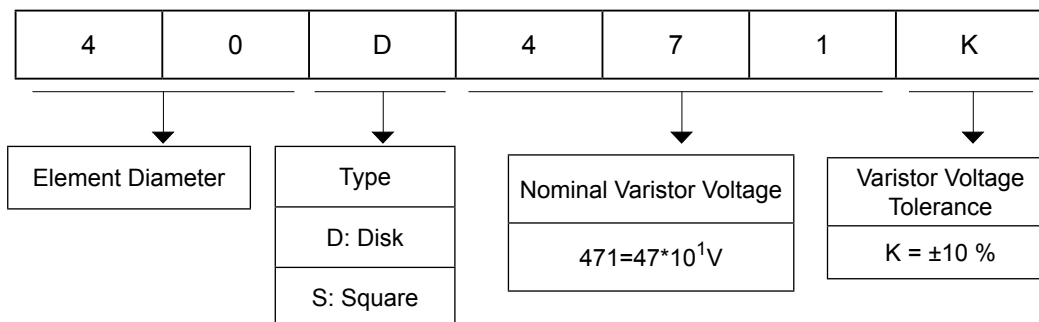
### General Information

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

### General Characteristics

- Body: Nickel Plated
- Devices with No Leads: Nickel Plated
- Operating Temperature:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- Storage Temperature:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Leads: Surface-mount, Axial Devices: Tin Plated

### Product Name



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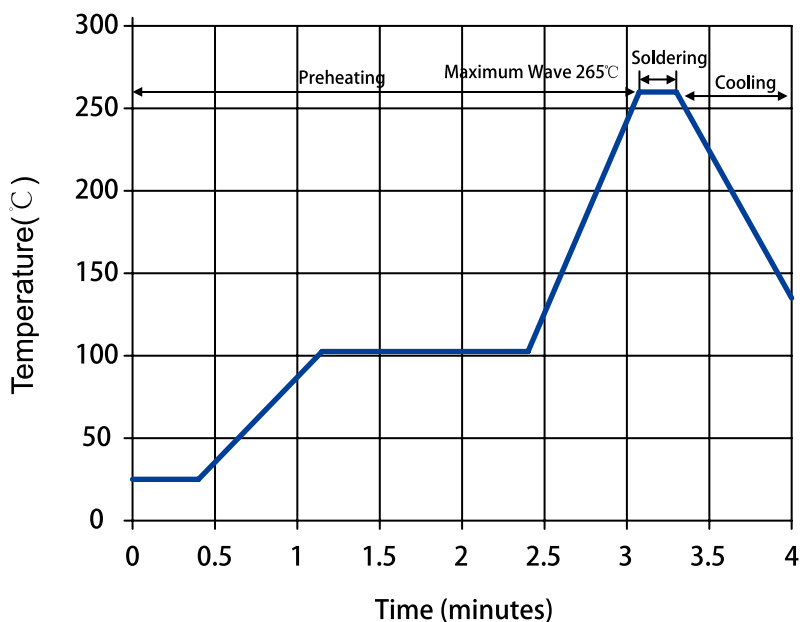
### Electrical Characteristics

Type Number	Maximum Allowable Voltage		Varistor Voltage $V_{1mA}(V)$	Maximum Clamping Voltage		Withstanding Surge Current $I(A)$	Maximum Energy (10/1000 $\mu s$ ) (J)	Typical Capacitance (Reference) @1KHz(pf)
	$V_{AC}(V)$	$V_{DC}(V)$		$I_P(A)$	$V_C(V)$			
40D201K	130	170	200(180~220)	300	340	40000	370	8400
40D221K	140	180	220(198~242)	300	360	40000	400	8200
40D241K	150	200	240(216~264)	300	395	40000	430	8000
40D271K	175	225	270(243~297)	300	455	40000	470	7600
40D301K	190	250	300(270~330)	300	500	40000	510	7300
40D331K	210	275	330(297~363)	300	550	40000	550	6700
40D361K	230	300	360(324~396)	300	595	40000	570	6200
40D391K	250	320	390(351~429)	300	650	40000	590	5100
40D431K	275	350	430(387~473)	300	710	40000	660	4900
40D471K	300	385	470(423~517)	300	775	40000	720	4300
40D511K	320	415	510(459~561)	300	845	40000	770	4200
40D561K	350	460	560(504~616)	300	925	40000	810	4000
40D621K	385	505	620(558~682)	300	1025	40000	860	3800
40D681K	420	560	680(612~748)	300	1120	40000	900	3500
40D751K	460	615	750(675~825)	300	1240	40000	940	3200
40D781K	485	640	780(702~858)	300	1290	40000	980	3000
40D821K	510	670	820(738~902)	300	1355	40000	1080	2900
40D911K	550	745	910(819~1001)	300	1500	40000	1150	2200
40D951K	575	765	950(855~1045)	300	1570	40000	1200	2000
40D102K	625	825	1000(900~1100)	300	1650	40000	1260	1800
40D112K	680	895	1100(990~1210)	300	1815	40000	1380	1600
40D122K	750	990	1200(1080~1320)	300	1980	40000	1380	1500
40D142K	880	1140	1400(1260~1540)	300	2310	40000	1550	1300
40D162K	1000	1280	1600(1440~1760)	300	2640	40000	1700	1150

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### Soldering Recommendation

#### Wave Lead Free Soldering Recommendation



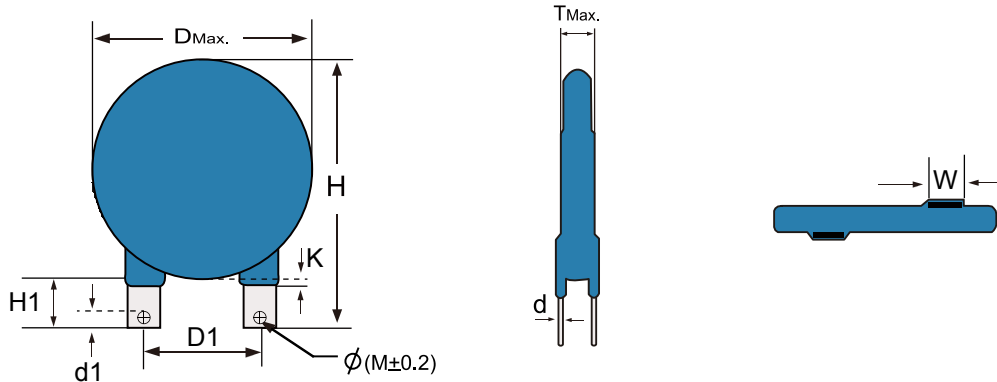
Item	Conditions
Peak Temperature	265°C
Dipping Time	10 seconds (max.)
Soldering	1 time

#### 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.)

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### Package Dimensions (Unit:mm)



**TABLE 1**

Symbol	Dimensions
H(max.)	52.5
H1(max.)	16.5
D(max.)	42.0
D1(±1.0)	25.4
T(max.)	TABLE 2
d(±0.1)	0.5
d1(±0.3)	3.7
K(max.)	3.2
W(±0.5)	7.0
Φ(M±0.2)	3.2

**TABLE 2**

Model	T(max.)	Model	T(max.)
201K	6.2	911K	10.4
221K	6.3	951K	10.6
241K	6.4	102K	11.2
271K	6.6	112K	11.8
301K	6.8	122K	12.3
331K	6.9	142K	13.3
361K	7.1	162K	14.3