



Φ20mm Metal Oxide Varistor 20D101K / 20D101KJ Wide Operating Voltage V1mA 18V - 1800V

Our Product Introduction

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Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, REACH, RoHS, ISO
- Model Number: 20D101K/20D101KJ
- Minimum Order Quantity: 250PCS
- Price: Negotiable
- Packaging Details: Bulk, AMMO packing
- Delivery Time: 1-2weeks

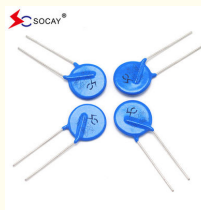


Product Specification

- Description: DIP Varistor
- Dimensions: Φ20mm
- VAC: 60V
- VDC: 85V
- Varistor Voltage: 100(90~110)V
- IP: 100A
- VC: 165V
- Rated Power: 1.0W
- Typ. Capacitance: 4000pF
- Withstanding Surge Current: 6.5KA (1 Time)
- Usage: Circuit Protection
- Highlight: Metal Oxide Varistor 20D101K, Metal Oxide Varistor 20D101KJ



More Images



Product Description

Φ20mm Series 20D101K/20D101KJ Metal Oxide Varistor Wide Operating Voltage (V1mA) Range from 18V to 1800V

DATASHEET: [20D Series_v2306.1.pdf](#)

1. Working Standard

Connected in parallel to the circuit, when the device is inactive, the resistance value is high and can be considered as an open circuit with little or no effect on the circuit. When there is an abnormal pulse, the resistance value drops instantly and the current is released momentarily. When the abnormal high voltage disappears, it returns to its high resistance state and the circuit works normally.

Description :semiconductor components

Type Number		Maximum Allowable voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current		Maximum Energy (10/1000μs)		Rated Power	Typical Capacitance (Reference)
Standard	High Surge	V _{AC} (V)	V _{DC} (V)	V _{1mA} (V)	I _P (A)	V _C (V)	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge	(W)	@1KHZ (pf)

Our Product Introduction

							1 Time	2 Times	1 Time	2 Times				
20D18 0K	20D18 0KJ	11	14	18(15~21.6)	20	36	200 0	100 0	3000	100 0	11	13	0.2	28500
20D22 0K	20D22 0KJ	14	18	22(19.5~26)	20	43	200 0	100 0	3000	100 0	14	16	0.2	18500
20D27 0K	20D27 0KJ	17	22	27(24~30)	20	53	200 0	100 0	3000	100 0	16	19	0.2	13000
20D33 0K	20D33 0KJ	20	26	33(29.5~36.5)	20	66	200 0	100 0	3000	100 0	23	24	0.2	11500
20D39 0K	20D39 0KJ	25	31	39(35~43)	20	77	200 0	100 0	3000	100 0	26	28	0.2	8500
20D47 0K	20D47 0KJ	30	38	47(42~54)	20	93	200 0	100 0	3000	100 0	30	34	0.2	7400
20D56 0K	20D56 0KJ	35	45	56(50~62)	20	100	200 0	100 0	3000	100 0	41	41	0.2	6500
20D68 0K	20D68 0KJ	40	56	68(61~75)	20	135	200 0	100 0	3000	100 0	46	49	0.2	5800
20D82 0K	20D82 0KJ	50	65	82(74~90)	10	135	650 0	400 0	1000 0	700 0	38	56	1.0	4900
20D10 1K	20D10 1KJ	60	85	100(90~110)	10	165	650 0	400 0	1000 0	700 0	45	70	1.0	4000
20D12 1K	20D12 1KJ	75	100	120(108~132)	10	200	650 0	400 0	1000 0	700 0	55	85	1.0	3300
20D15 1K	20D15 1KJ	95	125	150(135~165)	10	250	650 0	400 0	1000 0	700 0	70	106	1.0	2700
20D18 1K	20D18 1KJ	115	150	180(162~198)	10	300	650 0	400 0	1000 0	700 0	85	130	1.0	2200
20D20 1K	20D20 1KJ	130	170	200(180~220)	10	340	650 0	400 0	1000 0	700 0	95	140	1.0	2000
20D22 1K	20D22 1KJ	140	180	220(198~242)	10	360	650 0	400 0	1000 0	700 0	100	155	1.0	1800
20D24 1K	20D24 1KJ	150	200	240(216~264)	10	395	650 0	400 0	1000 0	700 0	108	168	1.0	1650
20D27 1K	20D27 1KJ	175	225	270(243~297)	10	455	650 0	400 0	1000 0	700 0	127	190	1.0	1500
20D30 1K	20D30 1KJ	190	250	300(270~330)	10	500	650 0	400 0	1000 0	700 0	136	210	1.0	1300
20D33 1K	20D33 1KJ	210	275	330(297~363)	10	550	650 0	400 0	1000 0	700 0	150	228	1.0	1200
20D36 1K	20D36 1KJ	230	300	360(324~396)	10	595	650 0	400 0	1000 0	700 0	163	255	1.0	1100
20D39 1K	20D39 1KJ	250	320	390(351~429)	10	650	650 0	400 0	1000 0	700 0	180	275	1.0	1000
20D43 1K	20D43 1KJ	275	350	430(387~473)	10	710	650 0	400 0	1000 0	700 0	190	305	1.0	930
20D47 1K	20D47 1KJ	300	385	470(423~517)	10	775	650 0	400 0	1000 0	700 0	220	350	1.0	850
20D51 1K	20D51 1KJ	320	415	510(459~561)	10	845	650 0	400 0	1000 0	700 0	220	360	1.0	780
20D56 1K	20D56 1KJ	350	460	560(504~616)	10	925	650 0	400 0	1000 0	700 0	220	380	1.0	710
20D62 1K	20D62 1KJ	385	505	620(558~682)	10	1025	650 0	400 0	1000 0	700 0	220	390	1.0	650
20D68 1K	20D68 1KJ	420	560	680(612~748)	10	1120	650 0	400 0	1000 0	700 0	230	400	1.0	600
20D75 1K	20D75 1KJ	460	615	750(675~825)	10	1240	650 0	400 0	1000 0	700 0	255	420	1.0	530
20D78 1K	20D78 1KJ	485	640	780(702~858)	10	1290	650 0	400 0	1000 0	700 0	265	440	1.0	510
20D82 1K	20D82 1KJ	510	670	820(738~902)	10	1350	650 0	400 0	1000 0	700 0	282	460	1.0	500
20D91 1K	20D91 1KJ	550	745	910(819~1001)	10	1500	650 0	400 0	1000 0	700 0	310	510	1.0	440
20D10 2K	20D10 2KJ	625	825	1000(900~1100)	10	1650	650 0	400 0	1000 0	700 0	342	565	1.0	400
20D11 2K	20D11 2KJ	680	895	1100(990~1210)	10	1810	650 0	400 0	1000 0	700 0	383	620	1.0	460
20D12 2K	20D12 2KJ	750	990	1200(1080~1320)	10	1980	650 0	400 0	1000 0	700 0	408	660	1.0	320
20D15 2K	20D15 2KJ	900	1200	1500(1350~1650)	10	2470	650 0	400 0	1000 0	700 0	420	660	1.0	260
20D16 2K	20D16 2KJ	1000	1280	1600(1440~1760)	10	2640	650 0	400 0	1000 0	700 0	606	660	1.0	320
20D18 2K	20D18 2KJ	1000	1460	1800(1620~1980)	10	2970	650 0	400 0	1000 0	700 0	625	660	1.0	320

2.Photo show



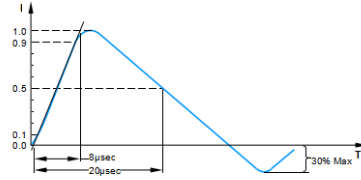
Features:

- u Wide operating voltage (V1mA) range from 18V to 1800V
- u Fast responding to transient over-voltage
- u Large absorbing transient energy capability
- u Low clamping ratio and no following-on current
- u Meets MSL level 1, per J-STD-020

Material	No Radioactive Material
Operating Temperature	-40 ~ +85
Storage Temperature	-55 ~ +125
Body	Nickel Plated
Leads	Tin Plated
Devices with No lead	Nickel Plated

Part Number	Quantity	Packaging Option	Packaging Specification
20DXXXX	250	Plastic Bag	Bulk Pack

Electrical Rating

Item	Test Condition / Description	Requirement																												
Maximum Allowable Voltage	The recommended maximum sine wave voltage (RMS) or the maximum DC voltage can be applied continuously.																													
Varistor Voltage	The voltage between two terminals with the specified measuring current 1mA DC applied is call Vb.																													
Maximum Clamping Voltage	The maximum voltage between two terminals with the specification standard impulse current. Applied waveform: 8/20μs 	To meet the specified value																												
Rated Wattage	The maximum average power that can be applied within the specified ambient temperature.																													
Energy	The maximum energy within the varistor voltage change of ±10% when one impulse of 10/1000μs, or 2 msec. is applied.																													
Withstanding Surge Current	The maximum current within the varistor voltage change of ±10% with the standard impulse current (8/20μs) applied one time																													
Varistor Voltage Temp. Coefficient	$\frac{V_b \text{ at } 20^{\circ}\text{C} - V_b \text{ at } 70^{\circ}\text{C}}{V_b \text{ at } 20^{\circ}\text{C}} \times \frac{1}{50} \times 100(\% / ^{\circ}\text{C})$	0.05% / °C max																												
Surge Life	The change of Vb shall be measured after the impulse listed below is applied 10,000 times continuously with the interval of ten seconds at room temperature. <table border="1" data-bbox="523 1691 885 1870"><thead><tr><th>Series</th><th>Voltage Range (V)</th><th>Current (A)</th></tr></thead><tbody><tr><td rowspan="2">5D Series</td><td>180K to 680K</td><td>10A (8/20μs)</td></tr><tr><td>820K to 751K</td><td>20A (8/20μs)</td></tr><tr><td rowspan="2">7D Series</td><td>180K to 680K</td><td>25A (8/20μs)</td></tr><tr><td>820K to 821K</td><td>50A (8/20μs)</td></tr><tr><td rowspan="2">10D Series</td><td>180K to 680K</td><td>50A (8/20μs)</td></tr><tr><td>820K to 112K</td><td>100A (8/20μs)</td></tr><tr><td rowspan="2">14D Series</td><td>180K to 680K</td><td>75A (8/20μs)</td></tr><tr><td>820K to 182K</td><td>150A (8/20μs)</td></tr><tr><td rowspan="2">20D Series</td><td>180K to 680K</td><td>100A (8/20μs)</td></tr><tr><td>820K to 182K</td><td>200A (8/20μs)</td></tr></tbody></table>	Series	Voltage Range (V)	Current (A)	5D Series	180K to 680K	10A (8/20μs)	820K to 751K	20A (8/20μs)	7D Series	180K to 680K	25A (8/20μs)	820K to 821K	50A (8/20μs)	10D Series	180K to 680K	50A (8/20μs)	820K to 112K	100A (8/20μs)	14D Series	180K to 680K	75A (8/20μs)	820K to 182K	150A (8/20μs)	20D Series	180K to 680K	100A (8/20μs)	820K to 182K	200A (8/20μs)	ΔVb / Vb ≤ ±10%
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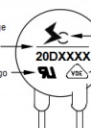
Part Numbering

20 D XXX K J

- J: High Surge, without: Standard
- Tolerance:
K: ±10%, L: ±15%, M: ±20%
- Varistor Voltage
- Type:
D: Disk, S: Square
- Element Diameter

Part Marking

- With a line: High Surge
- Without: Standard
- Logo
- Product Type
- UL Accreditation Logo
- VDE Accreditation Logo



Package Dimensions Unit: mm

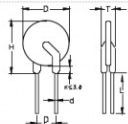
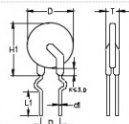


TABLE1	
Symbol	Dimensions
H(max.)	27.0
H1(max.)	27.0
L(min.)	15.0
L1(min.)	15.0
D(max.)	23.0
P(±1.0)	10.0
T(max.)	TABLE2
d(±0.05)	1.0
d1(±0.05)	1.0

TABLE2			
Model	T(max.)	Model	T(max.)
180K	4.8	331K	5.8
220K	4.9	361K	6.0
270K	5.0	391K	6.2
330K	5.2	431K	6.5
390K	5.5	471K	6.7
470K	5.6	511K	6.9
560K	5.7	561K	7.0
680K	5.08	621K	7.2
820K	4.9	681K	7.5
101K	5.1	751K	8.2
121K	5.3	781K	5.3
151K	5.6	821K	8.5
181K	5.0	911K	9.0
201K	5.2	102K	9.5
221K	5.3	112K	10.1
241K	5.4	122K	10.6
271K	5.6	152K	10.0
301K	5.7	182K	13.2

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