

OTPORNICI **Ot**

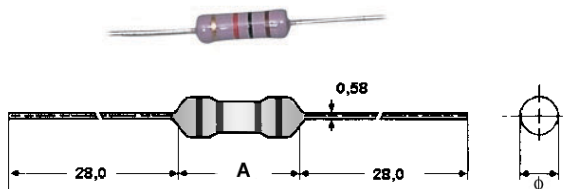


UGLJENOSLOJNI OTPORNICI
METALOSLOJNI OTPORNICI
KERAMIČKI OTPORNICI
OTPORNICI SA HLADNJAKOM
SMD OTPORNICI
OTPORNI NIZ
NTC OTPORNICI
PTC OTPORNICI
VDR OTPORNICI - VARISTORI

UGLJENOSLOJNI OTPORNICI OTU

Tehnički podaci:

Vrednosti: niz E 24
 Tolerancija: ± 5%
 Snaga (70°C): 1/4W, 1/2W, 1W, 2W
 Napon: 250 V (70°C)
 Granični napon: 500 V (70°C)
 Otpornost izolacije: 10¹⁰Ω
 Temperaturni opseg: -55°C ... + 155°C



Niz E24

1Ω	10Ω	100Ω	1KΩ	10KΩ	100KΩ	1MΩ	10MΩ
1,1Ω	11Ω	110Ω	1,1KΩ	11KΩ	110KΩ	1,1MΩ	
1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ	120KΩ	1,2MΩ	
1,3Ω	13Ω	130Ω	1,3KΩ	13KΩ	130KΩ	1,3MΩ	
1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ	150KΩ	1,5MΩ	
1,6Ω	16Ω	160Ω	1,6KΩ	16KV	160KΩ	1,6MΩ	
1,8Ω	18Ω	180Ω	1,8KΩ	18KΩ	180KΩ	1,8MΩ	
2,0Ω	20Ω	200Ω	2,0KΩ	20KΩ	200KΩ	2,0MΩ	
2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ	220KΩ	2,2MΩ	
2,4Ω	24Ω	240Ω	2,4KΩ	24KΩ	240KΩ	2,4MΩ	
2,7Ω	27Ω	270Ω	2,7KΩ	27KΩ	270KΩ	2,7MΩ	
3,0Ω	30Ω	300Ω	3,0KΩ	30KΩ	300KΩ	3,0MΩ	
3,3Ω	33Ω	330Ω	3,3KΩ	33KΩ	330KΩ	3,3MΩ	
3,6Ω	36Ω	360Ω	3,6KΩ	36KΩ	360KΩ	3,6MΩ	
3,9Ω	39Ω	390Ω	3,9KΩ	39KΩ	390KΩ	3,9MΩ	
4,3Ω	43Ω	430Ω	4,3KΩ	43KΩ	430KΩ	4,3MΩ	
4,7Ω	47Ω	470Ω	4,7KΩ	47KΩ	470KΩ	4,7MΩ	
5,1Ω	51Ω	510Ω	5,1KΩ	51KΩ	510KΩ	5,1MΩ	
5,6Ω	56Ω	560Ω	5,6KΩ	56KΩ	560KΩ	5,6MΩ	
6,2Ω	62Ω	620Ω	6,2KΩ	62KΩ	620KΩ	6,2MΩ	
6,8Ω	68Ω	680Ω	6,8KΩ	68KΩ	680KΩ	6,8MΩ	
7,5Ω	75Ω	750Ω	7,5KΩ	75KΩ	750KΩ	7,5MΩ	
8,2Ω	82Ω	820Ω	8,2KΩ	82KΩ	820KΩ	8,2MΩ	
9,1Ω	91Ω	910Ω	9,1KΩ	91KΩ	910KΩ	9,1MΩ	

Snaga (W)	Cena	A (mm)	φ(mm)
1/4	0,02	6,8	2,5
1/2	0,10	10	3,5
1/1	0,20	12	5,0
2/1	0,25	16	5,5

P(W)	Cena	Posebne vrednosti															
1/4	0,20	0,1Ω	0,12Ω	0,15Ω	0,18Ω	0,22Ω	0,27Ω	0,33Ω	0,39Ω	0,47Ω	0,56Ω	0,68Ω	0,82Ω	12MΩ	15MΩ	18MΩ	22MΩ
1/2	0,30	0,1Ω	0,12Ω	0,15Ω		0,22Ω		0,33Ω	0,39Ω	0,47Ω	0,56Ω	0,68Ω	0,82Ω	12MΩ	15MΩ	18MΩ	22MΩ
1/1	0,50	0,1Ω	0,12Ω	0,15Ω	0,18Ω	0,22Ω	0,27Ω	0,33Ω	0,39Ω	0,47Ω	0,56Ω	0,68Ω	0,82Ω	12MΩ	15MΩ	18MΩ	22MΩ
2/1	0,70	0,1Ω				0,22Ω	0,27Ω	0,33Ω	0,39Ω	0,47Ω	0,56Ω	0,68Ω	0,82Ω				

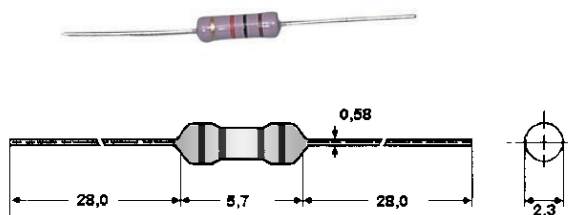
18000 Niš, Jovana Ristića 7, P.O.Box 135, Tel: 018 / 520-455, 522-814, 522-965, fax: 522-660
<http://www.MGelectronic.co.yu> e-mail: office@MGelectronic.co.yu

METALOSLOJNI OTPORNICI OTM

METALOSLOJNI OTPORNICI 1/4W OTM 1/4

Tehnički podaci:

Vrednosti: niz E 24
 Tolerancija: 1%
 Snaga (70°C): 0,25W
 Temperaturni koeficijent: 50ppm/°C
 Napon: 250 V (70°C)
 Granični napon: 500 V (70°C)
 Otpornost izolacije: $\geq 10^{13}\Omega$
 Učestanost ispada: $< 10^{-9}/h$
 Temperaturni opseg: -65°C ... + 150°C



Niz E24

1Ω	10Ω	100Ω	1KΩ	10KΩ	100KΩ	1MΩ	10MΩ
1,1Ω	11Ω	110Ω	1,1KΩ	11KΩ	110KΩ	1,1MΩ	
1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ	120KΩ	1,2MΩ	
1,3Ω	13Ω	130Ω	1,3KΩ	13KΩ	130KΩ	1,3MΩ	
1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ	150KΩ	1,5MΩ	
1,6Ω	16Ω	160Ω	1,6KΩ	16KV	160KΩ	1,6MΩ	
1,8Ω	18Ω	180Ω	1,8KΩ	18KΩ	180KΩ	1,8MΩ	
2,0Ω	20Ω	200Ω	2,0KΩ	20KΩ	200KΩ	2,0MΩ	
2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ	220KΩ	2,2MΩ	
2,4Ω	24Ω	240Ω	2,4KΩ	24KΩ	240KΩ	2,4MΩ	
2,7Ω	27Ω	270Ω	2,7KΩ	27KΩ	270KΩ	2,7MΩ	
3,0Ω	30Ω	300Ω	3,0KΩ	30KΩ	300KΩ	3,0MΩ	
3,3Ω	33Ω	330Ω	3,3KΩ	33KΩ	330KΩ	3,3MΩ	
3,6Ω	36Ω	360Ω	3,6KΩ	36KΩ	360KΩ	3,6MΩ	
3,9Ω	39Ω	390Ω	3,9KΩ	39KΩ	390KΩ	3,9MΩ	
4,3Ω	43Ω	430Ω	4,3KΩ	43KΩ	430KΩ	4,3MΩ	
4,7Ω	47Ω	470Ω	4,7KΩ	47KΩ	470KΩ	4,7MΩ	
5,1Ω	51Ω	510Ω	5,1KΩ	51KΩ	510KΩ	5,1MΩ	
5,6Ω	56Ω	560Ω	5,6KΩ	56KΩ	560KΩ	5,6MΩ	
6,2Ω	62Ω	620Ω	6,2KΩ	62KΩ	620KΩ	6,2MΩ	
6,8Ω	68Ω	680Ω	6,8KΩ	68KΩ	680KΩ	6,8MΩ	
7,5Ω	75Ω	750Ω	7,5KΩ	75KΩ	750KΩ	7,5MΩ	
8,2Ω	82Ω	820Ω	8,2KΩ	82KΩ	820KΩ	8,2MΩ	
9,1Ω	91Ω	910Ω	9,1KΩ	91KΩ	910KΩ	9,1MΩ	

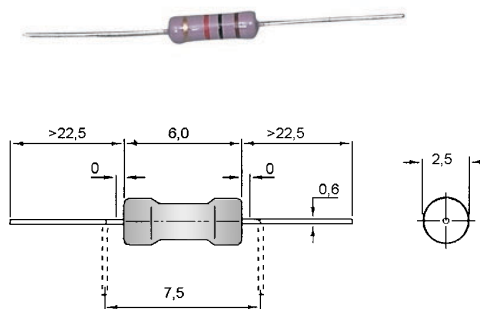
Cena: 0,05

METALOSLOJNI OTPORNICI OTM

METALOSLOJNI OTPORNICI 1/2W OTM1/2

Tehnički podaci:

Vrednosti: niz E 12
 Tolerancija: 10Ω - 470KΩ 1%
 1Ω - 8,2Ω 5%
 560KΩ - 2,2MΩ 5%
 Snaga (40°C): 0,79W
 (70°C): 0,61W
 Temperaturni koeficijent: 50 ppm/°C
 Napon, max: 350V
 Probajni napon: 750 V_{eff}
 Otpor izolacije: >10⁵ MΩ
 Naponski koeficijent: <10⁻⁷ k/W
 Termička otpornost: 145 k/W
 Učestanost ispada: < 1x10⁻⁸/h



1Ω	10Ω	100Ω	1KΩ	10KΩ	100KΩ	1MΩ
1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ	120KΩ	
1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ	150KΩ	1,5MΩ
1,8Ω	18Ω	180Ω	1,8KΩ	18KΩ	180KΩ	
2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ	220KΩ	2,2MΩ
2,7Ω	27Ω	270Ω	2,7KΩ	27KV	270KΩ	
3,3Ω	33Ω	330Ω	3,3KΩ	33KΩ	330KΩ	
3,9Ω	39Ω	390Ω	3,9KΩ	39KΩ	390KΩ	
4,7Ω	47Ω	470Ω	4,7KΩ	47KΩ	470KΩ	
5,6Ω	56Ω	560Ω	5,6KΩ	56KΩ	560KΩ	
6,8Ω	68Ω	680Ω	6,8KΩ	68KΩ	680KΩ	
8,2Ω	82Ω	820Ω	8,2KΩ	82KΩ	820KΩ	

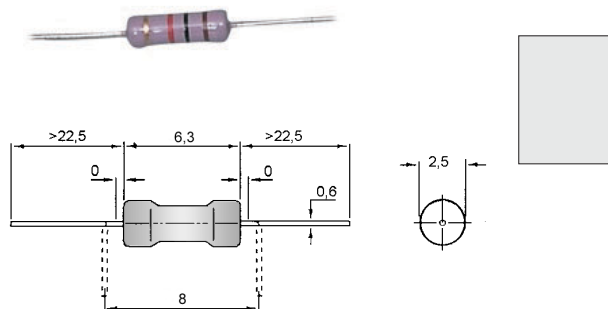
Cena: 0,07

METALOSLOJNI OTPORNICI OTM

METALOSLOJNI OTPORNICI 1W OTM1/1

Tehnički podaci:

Vrednosti: niz E 12
 Tolerancija: ± 5%
 Nominalna snaga: 1,0W
 Radni napon, max: 500 Veff
 Termički otpor: <140 k/W
 Otpornost izolacije: >1000MΩ
 Ispitni napon (1 min.): 500 Veff
 Temperaturni koeficijent: ±200 x 10⁻⁶/k
 Temperaturni opseg: -55 ... +250°C
 Učestanost ispada: <10 x 10⁻⁹/h
 Smanjenje opterećenja: linearno od 70° do 250°C (OW)



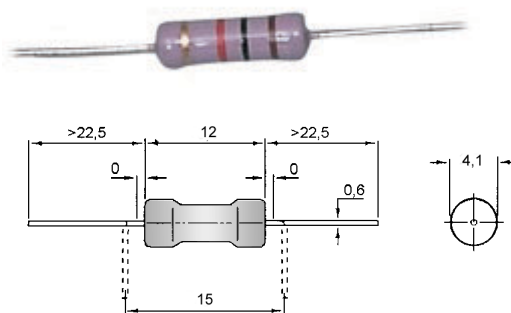
10Ω	12Ω	15Ω	18Ω	22Ω	27Ω	33Ω	39Ω	47Ω	56Ω	68Ω	82Ω
100Ω	120Ω	150Ω	180Ω	220Ω	270Ω	330Ω	390Ω	470Ω	560Ω	680Ω	820Ω
1KΩ	1,2KΩ	1,5KΩ	1,8KΩ	2,2KΩ	2,7KΩ	3,3KΩ	3,9KΩ	4,7KΩ	5,6KΩ	6,8KΩ	8,2KΩ
10KΩ	12KΩ	15KΩ	18KΩ	22KΩ	27KΩ	33KΩ	39KΩ	47KΩ	56KΩ	68KΩ	82KΩ
100KΩ	120KΩ	150KΩ	150KΩ	220KΩ	270KΩ	330Ω	390KΩ	470KΩ			

Cena: 0,25

METALOSLOJNI OTPORNICI 2W OTM 2/1

Tehnički podaci:

Vrednosti: niz E 12
 Tolerancija: ± 5%
 Nominalna snaga: 2,0W
 Radni napon, max: 500 Veff
 Termički otpor: <130 k/W
 Otpornost izolacije: >1000MΩ
 Ispitni napon (1 min.): 500 Veff
 Temperaturni koeficijent: ±200 x 10⁻⁶/k
 Temperaturni opseg: -55 ... +250°C
 Učestanost ispada: <10 x 10⁻⁹/h
 Smanjenje opterećenja: linearno od 70° do 250°C (OW)



10Ω	12Ω	15Ω	18Ω	22Ω	27Ω	33Ω	39Ω	47Ω	56Ω	68Ω	82Ω
100Ω	120Ω	150Ω	180Ω	220Ω	270Ω	330Ω	390Ω	470Ω	560Ω	680Ω	820Ω
1KΩ	1,2KΩ	1,5KΩ	1,8KΩ	2,2KΩ	2,7KΩ	3,3KΩ	3,9KΩ	4,7KΩ	5,6KΩ	6,8KΩ	8,2KΩ
10KΩ	12KΩ	15KΩ	18KΩ	22KΩ	27KΩ	33KΩ	39KΩ	47KΩ	56KΩ	68KΩ	82KΩ
100KΩ	120KΩ	150KΩ	150KΩ	220KΩ	270KΩ	330Ω	390KΩ	470KΩ	560KΩ		

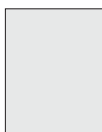
Cena: 0,35

KERAMIČKI OTPORNICI OTK

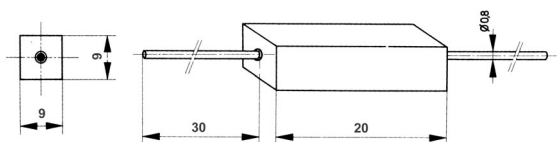
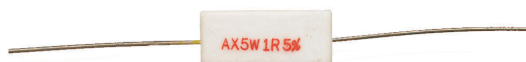
KERAMIČKI OTPORNICI 5W OTK5

Tehnički podaci:

Tip: horizontalni
 Niz: E 12 (0,1Ω - 100KΩ)
 Tolerancija: ± 5%
 Snaga (Tu = 70°C): 5W
 Temperaturni koeficijent: ± 300ppm °C
 Otpornost izolacije: >100MΩ



0,1Ω	1,0Ω	10Ω	100Ω	1KΩ	10KΩ
0,12Ω	1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ
0,15Ω	1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ
0,18Ω	1,8Ω	18Ω	180Ω	1,8KΩ	18KΩ
0,22Ω	2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ
0,27Ω	2,7Ω	27Ω	270Ω	2,7KΩ	27KΩ
0,33Ω	3,3Ω	33Ω	330Ω	3,3KΩ	33KΩ
0,39Ω	3,9Ω	39Ω	390Ω	3,9KΩ	39KΩ
0,47Ω	4,7Ω	47Ω	470Ω	4,7KΩ	47KΩ
0,56Ω	5,6Ω	56Ω	560Ω	5,6KΩ	56KΩ
0,68Ω	6,8Ω	68Ω	680Ω	6,8KΩ	68KΩ
0,82Ω	8,2Ω	82Ω	820Ω	8,2KΩ	82KΩ
				100KΩ	



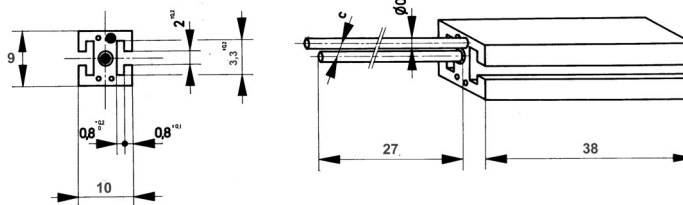
Cena: 0,70

KERAMIČKI OTPORNICI 7W OTK7

Tehnički podaci:

Tip: vertikalni
 Niz: E 12 (1Ω - 4,7K)
 Tolerancija: ± 5%
 Snaga (Tu = 70°C): 7W

1,0Ω	10Ω	100Ω	1KΩ
1,2Ω	12Ω		
1,5Ω	15Ω		
1,8Ω	18Ω		
2,2Ω	22Ω	220Ω	2,2KΩ
2,7Ω	27Ω		
3,3Ω	33Ω		
3,9Ω	39Ω		
4,7Ω	47Ω	470Ω	4,7KΩ
5,6Ω	56Ω		
6,8Ω	68Ω		
8,2Ω	82Ω		



Cena: 2,00

KERAMIČKI OTPORNICI OTK

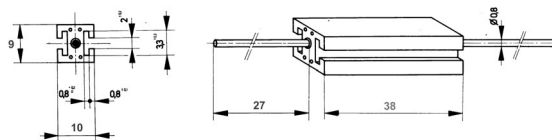
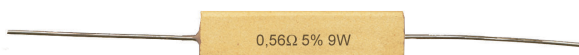
KERAMIČKI OTPORNICI 9W OTK9

HORIZONTALNI OTK9H

Tehnički podaci:

Tip: horizontalni
 Niz: E 12 (0,1Ω - 33KΩ)
 Tolerancija: ± 5%
 Snaga (Tu = 70°C): 9W

0,1Ω	1Ω	10Ω	100Ω	1KΩ	10KΩ
	1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ
	1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ
	1,8Ω	18Ω	180Ω	1,8KΩ	18KΩ
0,22Ω	2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ
0,27Ω	2,7Ω	27Ω	270Ω	2,7KΩ	
0,33Ω	3,3Ω	33Ω	330Ω	3,3KΩ	33KΩ
0,39Ω	3,9Ω	39Ω	390Ω	3,9KΩ	
0,47Ω	4,7Ω	47Ω	470Ω	4,7KΩ	
	5,1Ω	51Ω			
0,56Ω	5,6Ω	56Ω	560Ω	5,6KΩ	
0,68Ω	6,8Ω	68Ω	680Ω	6,8KΩ	
0,82Ω	8,2Ω	82Ω	820Ω	8,2KΩ	



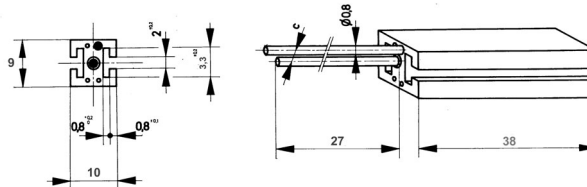
Cena: 1,50

VERTIKALNI OTK9V

Tehnički podaci:

Tip: vertikalni
 Niz: E 12 (0,33Ω - 10KΩ)
 Tolerancija: ± 5%
 Snaga (Tu = 70°C): 9W

	1Ω	10Ω	100Ω	1KΩ	10KΩ
	1,2Ω	12Ω	120Ω	1,2KΩ	
	1,5Ω	15Ω	150Ω	1,5KΩ	
	1,8Ω	18Ω	180Ω	1,8KΩ	
	2,2Ω	22Ω	220Ω	2,2KΩ	
	2,7Ω	27Ω	270Ω	2,7KΩ	
0,33Ω	3,3Ω	33Ω	330Ω	3,3KΩ	
	3,9Ω	39Ω	390Ω	3,9KΩ	
0,47Ω	4,7Ω	47Ω	470Ω	4,7KΩ	
		51Ω	510Ω		
0,56Ω	5,6Ω	56Ω	560Ω	5,6KΩ	
0,68Ω	6,8Ω	68Ω	680Ω	6,8KΩ	
	8,2Ω	82Ω	820Ω	8,2KΩ	



Cena: 2,50

KERAMIČKI OTPRONICI OTK

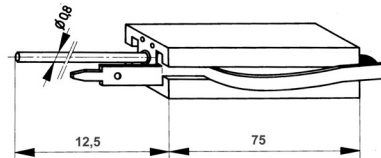
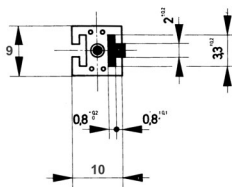
KERAMIČKI OTPORNICI 9W OTK9

KERAMIČKI OTPORNICI SA OSIGURAČEM OTK90

Tehnički podaci:

Tip: vertikalni
 Niz: E 12 (1Ω - 15KΩ)
 Tolerancija: ± 5%
 Snaga (Tu = 70°C): 9W

1,0Ω	10Ω	100Ω	1KΩ	10KΩ
1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ
1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ
1,8Ω	18Ω	180Ω	1,8KΩ	
2,2Ω	22Ω	220Ω	2,2KΩ	
2,7Ω	27Ω	270Ω	2,7KΩ	
3,3Ω	33Ω	330Ω	3,3KΩ	
3,9Ω	39Ω	390Ω	3,9KΩ	
4,7Ω	47Ω	470Ω	4,7KΩ	
5,6Ω	56Ω	560Ω	5,6KΩ	
6,8Ω	68Ω	680Ω	6,8KΩ	
8,2Ω	82Ω	820Ω	8,2KΩ	



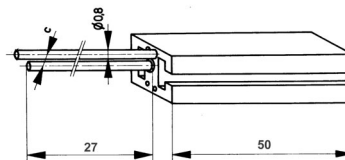
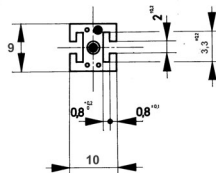
Cena: 4,00

KERAMIČKI OTPORNICI 11W OTK11

Tehnički podaci:

Tip: vertikalni
 Niz: E 12 (1Ω - 22KΩ)
 Tolerancija: ± 5%
 Snaga (Tu = 70°C): 11W

1Ω	10Ω	100Ω	1KΩ	10KΩ
1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ
1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ
1,8Ω	18Ω	180Ω	1,8KΩ	18KΩ
2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ
2,7Ω	27Ω	270Ω	2,7KΩ	
3,3Ω	33Ω	330Ω	3,3KΩ	
3,9Ω	39Ω	390Ω	3,9KΩ	
4,7Ω	47Ω	470Ω	4,7KΩ	
5,6Ω	56Ω	560Ω	5,6KΩ	
6,8Ω	68Ω	680Ω	6,8KΩ	
8,2Ω	82Ω	820Ω	8,2KΩ	



Cena: 2,50

KERAMIČKI OTPORNICI OTK

KERAMIČKI OTPORNICI 17W OTK17

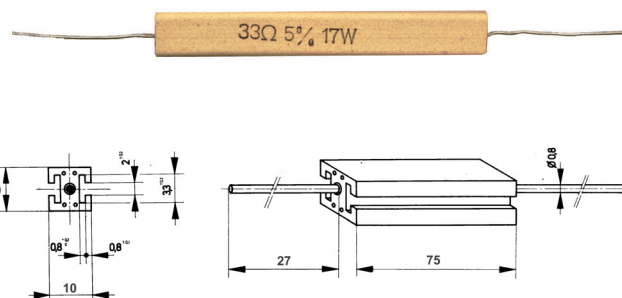
HORIZONTALNI OTK17H

Tehnički podaci:

Tip: horizontalni
 Niz: E 12 (1Ω - 22KΩ)
 Tolerancija: ± 5%
 Snaga (Tu = 70°C): 17W

1,0Ω	10Ω	100Ω	1KΩ	10KΩ
1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ
1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ
1,8Ω	18Ω	180Ω	1,8KΩ	18KΩ
2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ
2,7Ω	27Ω	270Ω	2,7KΩ	
3,3Ω	33Ω	330Ω	3,3KΩ	
3,9Ω	39Ω	390Ω	3,9KΩ	
4,7Ω	47Ω	470Ω	4,7KΩ	
5,6Ω	56Ω	560Ω	5,6KΩ	
6,8Ω	68Ω	680Ω	6,8KΩ	
8,2Ω	82Ω	820Ω	8,2KΩ	

Cena: 2,50



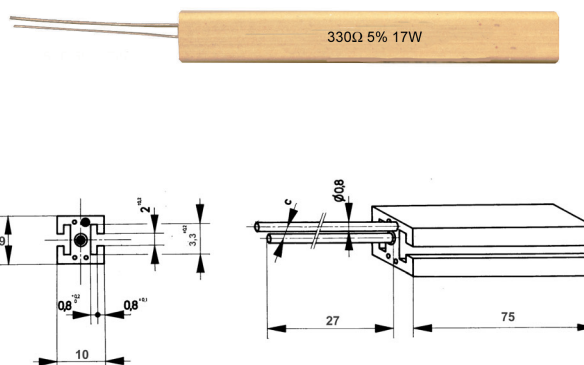
VERTIKALNI OTK17V

Tehnički podaci:

Tip: vertikalni
 Niz: E 12 (1Ω-22KΩ)
 Tolerancija: ± 5%
 Snaga (Tu = 70°C): 17W

1,0Ω	10Ω	100Ω	1KΩ	10KΩ
1,2Ω	12Ω	120Ω	1,2KΩ	12KΩ
1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ
1,8Ω	18Ω	180Ω	1,8KΩ	18KΩ
2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ
2,7Ω	27Ω	270Ω	2,7KΩ	
3,3Ω	33Ω	330Ω	3,3KΩ	
3,9Ω	39Ω	390Ω	3,9KΩ	
4,7Ω	47Ω	470Ω	4,7KΩ	
5,6Ω	56Ω	560Ω	5,6KΩ	
6,8Ω	68Ω	680Ω	6,8KΩ	
8,2Ω	82Ω	820Ω	8,2KΩ	

Cena: 3,50

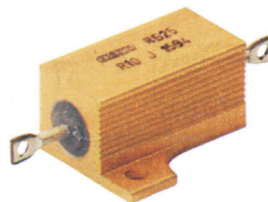
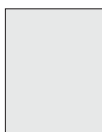


OTPORNICI SA HLADNJAKOM OTH

OTPORNICI SA HLADNJAKOM 25W OTH25

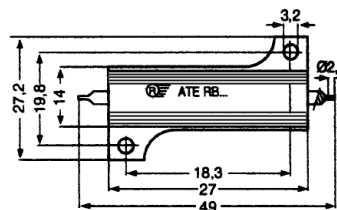
Tehnički podaci:

Niz:	E12 (0,1Ω - 68 KΩ)
Tolerancija:	± 5%
Snaga (Tu = 70°C):	25W
Napon:	max 550V
Temperaturni koeficijent:	1,0-9,9Ω TK50
	10-169Ω TK30
	170Ω-68K TK20



0,1Ω	1,0Ω	10Ω	100Ω	1KΩ	10KΩ
0,12Ω	1,2Ω	12Ω			
0,15Ω	1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ
0,18Ω	1,8Ω	18Ω			
0,22Ω	2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ
0,27Ω	2,7Ω	27Ω			
0,33Ω	3,3Ω	33Ω	330Ω	3,3KΩ	33KΩ
0,39Ω	3,9Ω	39Ω			
0,47Ω	4,7Ω	47Ω	470Ω	4,7KΩ	47KΩ
0,56Ω	5,6Ω	56Ω			
0,68Ω	6,8Ω	68Ω	680Ω	6,8KΩ	68KΩ
0,82Ω	8,2Ω	82Ω	820Ω	8,2KΩ	

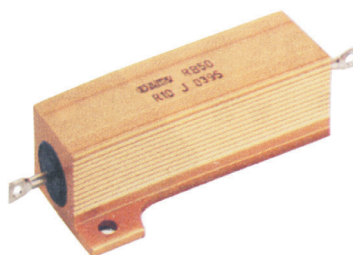
Cena: 8,00



OTPORNICI SA HLADNJAKOM 50W OTH50

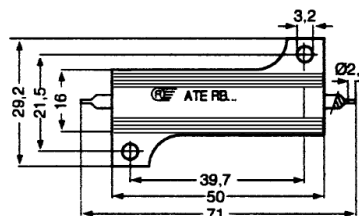
Tehnički podaci:

Niz:	E12 (0,1Ω - 220 KΩ)
Tolerancija:	± 5%
Snaga (Tu = 70°C):	50W
Napon:	max 550V
Temperaturni koeficijent:	1,0-9,9Ω TK50
	10-469Ω TK30
	470Ω-220K TK20



0,1Ω	1,0Ω	10Ω	100Ω	1KΩ	10KΩ	100KΩ
0,12Ω	1,2Ω	12Ω				
0,15Ω	1,5Ω	15Ω	150Ω	1,5KΩ	15KΩ	150KΩ
0,18Ω	1,8Ω	18Ω				
0,22Ω	2,2Ω	22Ω	220Ω	2,2KΩ	22KΩ	220KΩ
0,27Ω	2,7Ω	27Ω				
0,33Ω	3,3Ω	33Ω	330Ω	3,3KΩ	33KΩ	
0,39Ω	3,9Ω	39Ω				
0,47Ω	4,7Ω	47Ω	470Ω	4,7KΩ	47KΩ	
0,56Ω	5,6Ω	56Ω				
0,68Ω	6,8Ω	68Ω	680Ω	6,8KΩ	68KΩ	
0,82Ω	8,2Ω	82Ω	820Ω	8,2KΩ	82KΩ	

Cena: 12,00

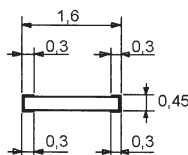


SMD OTPORNICI. OTSMD

0,1 W 1 % 0603 OTSMD01

Tehnički podaci:

Nominalna snaga: 0,1 W
 Radni napon, max.: 50 V_{eff}
 Termički otpor: 550 K/W
 Otpornost izolacije: > 10⁴ MΩ
 Ispitni napon (1 min.): 500 V_{eff}
 Temperaturni koeficijent: ±200 x 10⁻⁶ K⁻¹
 Temperaturni opseg: -55°C ... +125°C Cena: 0,03

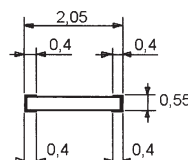


10Ω	15Ω	22Ω	33Ω	47Ω	68Ω	100Ω	150Ω	220Ω	330Ω	470Ω	680Ω
1KΩ	1,5KΩ	2,2KΩ	3,3KΩ	4,7KΩ	6,8KΩ	10KΩ	15KΩ	22KΩ	33KΩ	47KΩ	68KΩ
100KΩ	150KΩ	220KΩ	330KΩ	470KΩ	680KΩ	1MΩ					

1/8 W 1 % 0805 OTSMD1/8

Tehnički podaci:

Nominalna snaga: 0,125 W
 Radni napon, max.: 150 V_{eff}
 Termički otpor: 440 K/W
 Otpornost izolacije: > 10⁴ MΩ
 Ispitni napon (1 min.): 500 V_{eff}
 Temperaturni koeficijent: TK100
 Temperaturni opseg: -55°C ... +125°C Cena: 0,04

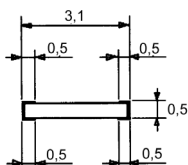


10Ω	15Ω	22Ω	33Ω	47Ω	68Ω						
100Ω	150Ω	220Ω	330Ω	470Ω	680Ω						
1KΩ	1,2KΩ	1,5KΩ	1,8KΩ	2,2KΩ	2,7KΩ	3,3KΩ	3,9KΩ	4,7KΩ	5,6KΩ	6,8KΩ	8,2KΩ
10KΩ	12KΩ	15KΩ	18KΩ	22KΩ	27KΩ	33KΩ	39KΩ	47KΩ	56KΩ	68KΩ	82KΩ
100KΩ	120KΩ	150KΩ	180KΩ	220KΩ	270KΩ	330KΩ	390KΩ	470KΩ	560KΩ	680KΩ	820KΩ
1MΩ	1,2MΩ	1,5MΩ	1,8MΩ	2,2MΩ	2,7MΩ	3,3MΩ	3,9MΩ	4,7MΩ	5,6MΩ	6,8MΩ	8,2MΩ

1/4 W 1 % 1206 OTSMD1/4

Tehnički podaci:

Nominalna snaga: 0,25 W
 Radni napon, max.: 200 V_{eff}
 Termički otpor: 220 K/W
 Otpornost izolacije: > 10⁴ MΩ
 Ispitni napon (1 min.): 500 V_{eff}
 Temperaturni koeficijent: ±100 x 10⁻⁶ K⁻¹
 Temperaturni opseg: -55°C ... +125°C Cena: 0,04



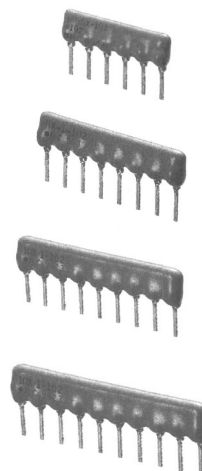
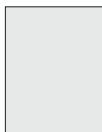
1Ω	1,2Ω	1,5Ω	1,8Ω	2,2Ω	2,7Ω	3,3Ω	3,9Ω	4,7Ω	5,6Ω	6,8Ω	8,2Ω
10Ω	12Ω	15Ω	18Ω	22Ω	27Ω	33Ω	39Ω	47Ω	56Ω	68Ω	82Ω
100Ω	120Ω	150Ω	180Ω	220Ω	270Ω	330Ω	390Ω	470Ω	560Ω	680Ω	820Ω
1KΩ	1,2KΩ	1,5KΩ	1,8KΩ	2,2KΩ	2,7KΩ	3,3KΩ	3,9KΩ	4,7KΩ	5,6KΩ	6,8KΩ	8,2KΩ
10KΩ	12KΩ	15KΩ	18KΩ	22KΩ	27KΩ	33KΩ	39KΩ	47KΩ	56KΩ	68KΩ	82KΩ
100KΩ	120KΩ	150KΩ	180KΩ	220KΩ	270KΩ	330KΩ	390KΩ	470KΩ	560KΩ	680KΩ	820KΩ
1MΩ	1,2MΩ	1,5MΩ	1,8MΩ	2,2MΩ	2,7MΩ	3,3MΩ	3,9MΩ	4,7MΩ	5,6MΩ	6,8MΩ	8,2MΩ

OTPORNI NIZ OTN

PARALELNA VEZA OTPORNIKA

Tehnički podaci:

Snaga:	0,125W
Napon, U_{max} :	200V
Temperaturni opseg:	-55 ... +125°C
Temperaturni koeficijent:	200 ppm
Raster:	2,54 mm
Tolerancija:	± 5%



5/6 Pet otpornika šest pina

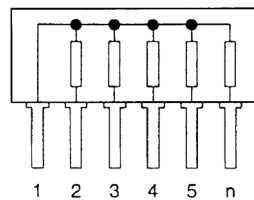
100Ω	1,0KΩ	10KΩ	100KΩ	1MΩ
150Ω	1,5KΩ	15KΩ	150KΩ	
220Ω	2,2KΩ	22KΩ	220KΩ	
330Ω	3,3KΩ	33KΩ	330KΩ	
470Ω	4,7KΩ	47KΩ	470KΩ	
680Ω	6,8KΩ	68KΩ		

Cena: 0,60

7/8 Sedam otpornika osam pina

100Ω	1,0KΩ	10KΩ	100KΩ	1MΩ
150Ω	1,5KΩ	15KΩ		
220Ω	2,2KΩ	22KΩ	220KΩ	
330Ω	3,3KΩ	33KΩ		
470Ω	4,7KΩ	47KΩ	470KΩ	
680Ω	6,8KΩ	68KΩ	680KΩ	

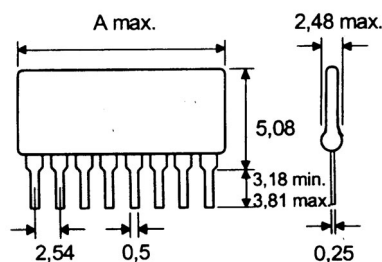
Cena: 0,70



8/9 Osam otpornika devet pina

10Ω	100Ω	1,0KΩ	10KΩ	100KΩ	1MΩ
	120Ω	1,2KΩ			
	150Ω	1,5KΩ	15KΩ	150KΩ	
	180Ω	1,8KΩ			
22Ω	220Ω	2,2KΩ	22KΩ	220KΩ	
	270Ω	2,7KΩ			
33Ω	330Ω	3,3KΩ	33KΩ	330KΩ	
	390Ω	3,9KΩ			
47Ω	470Ω	4,7KΩ	47KΩ	470KΩ	
	560Ω	5,6KΩ			
68Ω	680Ω	6,8KΩ	68KΩ	680KΩ	
	820Ω	8,2KΩ			

Cena: 0,80



9/10 Devet otpornika deset pina

100Ω	1,0KΩ	10KΩ	100KΩ	1MΩ
	1,2KΩ	12KΩ		
150Ω	1,5KΩ	15KΩ		
	1,8KΩ			
220Ω	2,2KΩ			
	2,7KΩ			
330Ω	3,3KΩ	33KΩ		
	3,9KΩ			
470Ω	4,7KΩ	47KΩ	470KΩ	
	5,6KΩ			
680Ω		68KΩ		
	8,2KΩ			

Cena: 0,90

Broj otpornika	Broj pinova	A (mm)
5	6	15,20
7	8	20,19
8	9	22,73
9	10	25,27

18000 Niš, Jovana Ristića 7, P.O.Box 135, Tel: 018 / 520-455, 522-814, 522-965, fax: 522-660
<http://www.MGelectronic.co.yu> e-mail: office@MGelectronic.co.yu

OTPORNI NIZ OTN

REDNA VEZA OTPORNIKA

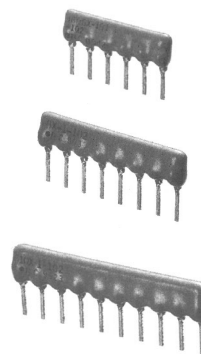
Tehnički podaci:

Snaga:	0,125W
Napon, U_{max} :	200V
Temperaturni opseg:	-55 ... +125°C
Temperaturni koeficijent:	200 ppm
Raster:	2,54 mm
Tolerancija:	± 5%

3/6 Tri otpornika šest pina

	100Ω	1,0KΩ	10KΩ	100KΩ	1MΩ
	150Ω	1,5KΩ	15KΩ	150KΩ	
	220Ω	2,2KΩ	22KΩ	220KΩ	
33Ω	330Ω	3,3KΩ	33KΩ	330KΩ	
47Ω	470Ω	4,7KΩ	47KΩ	470KΩ	
68Ω	680Ω	6,8KΩ	68KΩ		

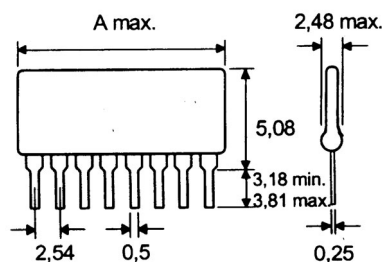
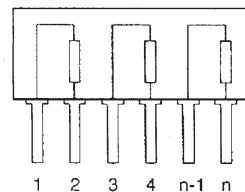
Cena: 0,60



4/8 Četiri otpornika osam pina

10Ω	100Ω	1,0KΩ	10KΩ	100KΩ	1MΩ
	120Ω	1,2KΩ	12KΩ		
	150Ω	1,5KΩ	15KΩ	150KΩ	
	180Ω	1,8KΩ	18KΩ		
22Ω	220Ω	2,2KΩ	22KΩ	220KΩ	
	270Ω	2,7KΩ	27KΩ		
33Ω	330Ω	3,3KΩ	33KΩ	330KΩ	
	390Ω	3,9KΩ	39KΩ		
47Ω	470Ω	4,7KΩ	47KΩ	470KΩ	
	560Ω	5,6KΩ			
68Ω	680Ω	6,8KΩ	68KΩ	680KΩ	
82Ω	820Ω	8,2KΩ			

Cena: 0,70



5/10 Pet otpornika deset pina

	100Ω	1,0KΩ	10KΩ	100KΩ	1MΩ
	150Ω	1,5KΩ	15KΩ		
22Ω	220Ω	2,2KΩ	22KΩ	220KΩ	
33Ω	330Ω	3,3KΩ	33KΩ		
47Ω	470Ω	4,7KΩ	47KΩ	470KΩ	
68Ω	680Ω	6,8KΩ	68KΩ		

Cena: 0,90

Broj otpornika	Broj pinova	A (mm)
3	6	15,20
4	8	20,19
5	10	25,27

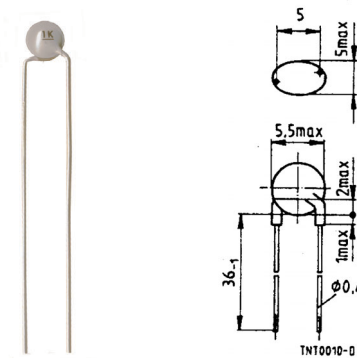
NTC OTPORNICI OTNTC
SERIJA K 164

Primena:

Temperaturna kompenzacija,
merenje i regulacija temperature.

Tehnički podaci:

Snaga, max. (25°C): 450mW
Tolerancija: ± 10%
Nominalna temperatura: +25°C
Temperaturni opseg: -55 ... +125°C
Temperaturna provodnost (vazduh): ca 7,5mW/K
Termička konstanta hlađenja (vazduh): ca 20s
Toplotni kapacitet: ca 150mJ/K
Cena: 1,20



4,7Ω 330Ω 680Ω 1kΩ 1,5kΩ 2,2kΩ 3,3kΩ 4,7kΩ 6,8kΩ 10kΩ 15kΩ 22kΩ
33kΩ 47kΩ 68kΩ 100kΩ 330kΩ 470kΩ

SERIJA K 45

Primena:

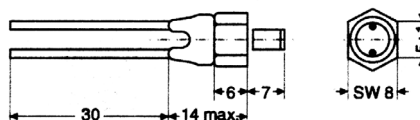
Temperaturna kompenzacija,
merenje i regulacija temperature.

Montira se na šasiju zavrtnjem M3.
Aluminijumsko kućište zavrtnja
omogućuje dobar termički kontakt,



Tehnički podaci:

Temperaturni opseg: -55 ... +125°C
Nominalna temperatura: + 25°C
Snaga (25°C): max 450 mW
Tolerancija otpornosti: ± 10%
Toplotna provodnost vazduh/šasija: ca 9,2/20mW/K
Konstantna vremena hlađenja vazduh
šasija: ca 75/15 s



Cena: 4,00

47Ω 100Ω 220Ω 470Ω 1kΩ 2,2kΩ 4,7kΩ 6,8kΩ 10kΩ 22kΩ 47kΩ
68kΩ 100kΩ 150kΩ

PTC OTPORNICI OTPTC

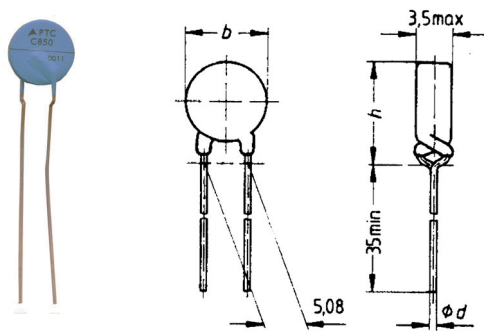
Primena:

Zaštita od kratkog spoja i struje preopterećenja

Zamena za topljive osigurače

PTC 30V

Tehnički podaci: **30V**
 Radni napon ($T_A = 60^\circ\text{C}$): 30V
 Nominalni napon: 24V
 Vreme uključivanja: 10s
 Tolerancija otpornosti: $\pm 25\%$
 Ciklus uključivanja: 100
 Temperaturni opseg:
 U = O: -40 ... + 125°C
 U = U_{max}: 0 ... + 60°C

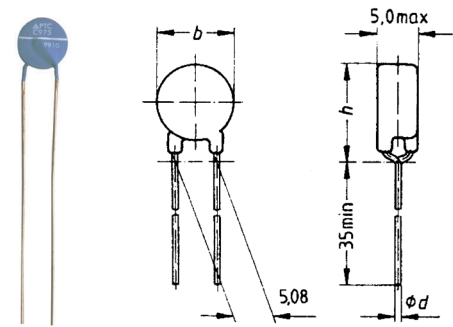


Tip	Cena	U _{max} (V)	T _{ref} (°C)	R _N (Ω)	I _N (mA)	I _S (mA)	I _{Smax} (A)	I _R (mA)	b _{max} (mm)	d (mm)	h _{max} (mm)
30V0,8	3,50	30	120	0,8	850	1700	5,5	80	13,5	0,6	17,0
30V1,2	2,80	30	120	1,2	600	1200	4,3	70	11,0	0,6	14,5
30V1,8	2,40	30	120	1,8	450	900	3,0	60	9,0	0,6	12,5
30V4,6	2,10	30	120	4,6	250	500	1,0	45	6,5	0,6	10,0
30V13	1,80	30	120	13,0	120	240	0,7	25	4,0	0,5	7,5

U_{max} = Radni napon (60°C), T_{ref} = Referentna temperatura, R_N = Nominalni otpor, I_N = nomin. struja, I_S = Struja uključivanja, I_{Smax} = max dopuštena struja PU U_{max}, I_R = struja gubitaka pri U_{max}.

PTC 265V

Tehnički podaci: **265V**
 Radni napon ($T_A = 60^\circ\text{C}$): 265V
 Nominalni napon: 220V
 Vreme uključivanja: 6s
 Tolerancija otpornosti: $\pm 25\%$
 Ciklus uključivanja: 100
 Temperaturni opseg:
 U = O: -25 ... + 125°C
 U = U_{max}: 0 ... + 60°C



Tip	Cena	U _{max} (V)	T _{ref} (°C)	R _N (Ω)	I _N (mA)	I _S (mA)	I _{Smax} (A)	I _R (mA)	b _{max} (mm)	d (mm)	h _{max} (mm)
265V6	5,50	265	80	6,0	170	350	4,1	10	17,5	0,6	21,0
265V10	3,30	265	80	10,0	110	230	2,2	8	13,5	0,6	17,0
265V15	3,40	265	80	15,0	90	180	1,5	6	11,0	0,6	14,5
265V25	3,30	265	80	25,0	60	130	1,0	5	9,0	0,6	12,5
265V70	2,80	265	80	70,0	30	70	0,4	4	6,5	0,6	10,0
265V150	2,20	265	80	150,0	15	40	0,2	3	4,0	0,5	7,5

U_{max} = Radni napon (60°C), T_{ref} = Referentna temperatura, R_N = Nominalni otpor, I_N = nomin. struja, I_S = Struja uključivanja, I_{Smax} = max dopuštena struja PU U_{max}, I_R = struja gubitaka pri U_{max}.

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VDR OTPRONICI - VARISTORI OTVDR

Tehnički podaci:

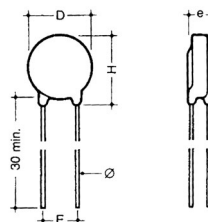
Materijal: cinkoksid (ZnO)
 Radna temperatura: - 40°C + 85°C
 Temperatura površine, max: 115°C
 Vreme reagovanja, max: < 25 nS
 Koeficijent napon/temperatura: -0,05% / °C
 Ispitni napon: 2.500V
 Napon izolacije pri 500V: < 1000 MΩ
 Tolerancija (U_{RMS}): ±10%



Tip	Cena	U _{RMS} (V~)	U _{RMS} (V=)	U _V (V=)	U _S (V)	I _{max} (A)	I _P (A)	E ₁ (J)	E ₁₀ (J)	C (pF)	N _M (W)	e (mm)
V14K9	0,70	14	18	22	43	125	2,5	0,9	0,6	1900	0,02	3,6
V14K13	0,80	14	18	22	43	250	5,0	2,0	1,3	4000	0,05	4,3
V25K9	0,60	25	31	39	77	50	1,0	0,7	0,4	660	0,01	3,6
V25K9	0,70	25	31	39	77	125	2,5	1,6	1,0	1250	0,02	3,6
V30K9	0,70	30	38	47	93	125	2,5	2,0	1,0	1050	0,02	3,8
V30K13	0,80	30	38	47	93	250	5,0	4,4	4,0	2150	0,05	4,4
V30K17	1,20	30	38	47	93	500	10,0	9,0	7,5	3500	0,1	4,4
V60K9	0,70	60	80	100	165	600	10,0	5,0	1,7	440	0,2	4,7
V60K13	0,80	60	80	100	165	1250	25,0	10,0	7,0	870	0,4	5,1
V60K17	1,20	60	80	100	165	2500	50,0	20,0	14,0	2200	0,6	5,1
V130K7	0,60	130	170	205	340	1200	5,0	15,0	1,9	250	0,25	6,2
V130K13	0,80	130	170	205	315	4500	25,0	55,0	9,0	1000	0,6	6,7
V230K7	0,60	230	300	360	595	200	5,0	9,0	2,4	55	0,1	6,2
V230K9	0,70	230	300	360	595	600	10,0	20,0	6,0	140	0,2	6,2
V230K13	0,80	230	300	360	595	1250	25,0	35,0	14,3	250	0,4	6,7
V230K17	1,20	230	300	360	595	2500	50,0	70,0	38,0	550	0,6	6,7
V250K7	0,60	250	320	390	645	200	5,0	10,0	2,8	50	0,1	6,4
V250K9	0,70	250	320	390	645	600	10,0	21,0	7,3	130	0,2	6,4
V250K13	0,80	250	320	390	645	1250	25,0	40,0	19,0	230	0,4	6,8
V250K17	1,20	250	320	390	645	2500	50,0	72,0	39,0	500	0,6	6,8
V275K7	0,60	275	350	430	710	200	5,0	11,0	3,0	45	0,1	6,7
V275K9	0,70	275	350	430	710	600	10,0	23,0	7,4	120	0,2	6,7
V275K13	0,80	275	350	430	710	1250	25,0	45,0	20,0	210	0,4	7,2
V275K17	1,20	275	350	430	710	2500	50,0	75,0	40,0	450	0,6	7,2
V300K9	0,70	300	385	470	775	600	10,0	25,0	7,5	100	0,2	7,0
V300K13	0,80	300	385	470	775	1250	25,0	45,0	20,0	180	0,4	7,5
V420K9	0,90	420	560	680	1050	2500	10,0	85,0	7,5	130	0,4	7,0
V420K13	1,00	420	560	680	1050	4500	25,0	150,0	20,0	250	0,6	7,5

U_{RMS} = max. dopušten radni napon, U_V = napon varistora pri 1mA, U_S = Vršna vrednost napona smetnje (8/20μs) ,
 I_{max} = dopuštena vršna struja (8x20μs), 2 naponska udara, I_P = vršna vrednost udarne struje (8x20μs), E₁ = Absorcija energije
 10/1000μs, 1 naponski udar, E₁₀ = Absorcija energije 10 naponskih udara, C = kapacitet, tipičan, N_M = srednja snaga, e = debljina
 pločice

Tip	D _{max} (mm)	H _{max} (mm)	E (mm)	∅ (mm)
K7	7	10	5,08	0,6
K9	9	12	5,08	0,6
K13	13	16	7,62	0,6
K17	17	20	7,62	0,6



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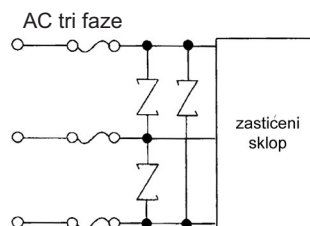
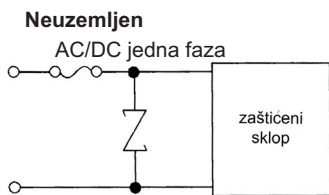
VDR OTPORNICI - VARISTORI OTVDR

PRIMENA VARISTORA

Metaloksidni varistor je naponsko-zavisni nelinearni otpornik ca U-I karakteristikom dvojne zener diode. Tok struje kroz varistor je eksponencijalno zavisn od napona i racuna se po formuli $I=KU^{\alpha}$. Metaloksidni varistor je namenjen za zaštitu osetljivih elektronskih elemenata od prenaponskih impulsa. Kada se pojavi prenaponski impuls, otpor varistora se naglo smanji sa vrlo velike vrednosti na nivo dobre provodnosti. Varistor apsorbira energiju prenaponskog impulsa i smanjuje prenapon na nivo bezopasan za elektronske elemente, te ih na taj način čuva od oštećenja.

VARISTOR U NEUZEMLJENOM SPOJU

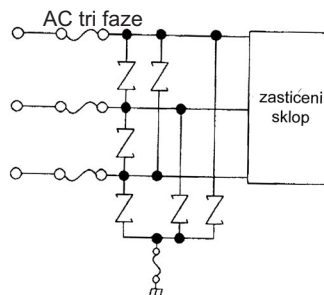
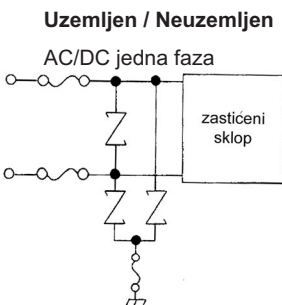
Tip	Napon
V250	220V AC
V275	220V AC
V300	220V AC
V130	100V AC
V14	12V AC
V25	48V AC



VARISTOR U UZEMLJENOM / NEUZEMLJENOM SPOJU

Uzemljen / Neuzemljen

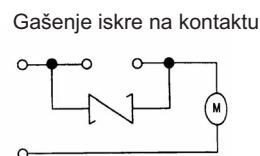
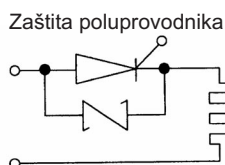
Tip	Napon
V275	100V AC
V275	220V AC
V300	100V AC
V300	220V AC



VARISTOR U KOLU PREKIDAČA

Zaštita kola prekidača

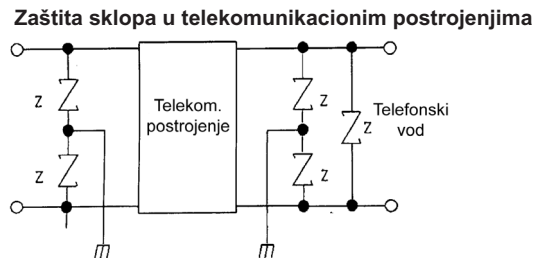
Tip	Napon
V14	12V AC
V25	24V AC
V130	100V AC

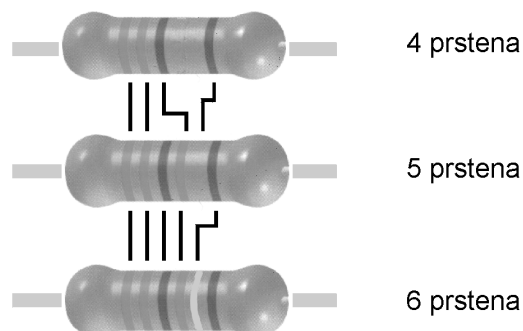


VARISTOR U TELEKOMUNIKACIONIM POSTROJENJIMA

Zaštita sklopa u telekomunikacionim postrojenjima

Tip	Napon
V14	12V AC
V25	24V AC



OBELEZAVANJE OTPORNIKA


Boja	1.prsten	2.prsten	3.prsten	Broj nula	Tolerancija	Temp. koef.
CRNA	0	0	0			
BRAON	1	1	1	0	± 1%	100ppm
CRVENA	2	2	2	00	± 2%	50ppm
NARANDŽASTA	3	3	3	000		15ppm
ŽUTA	4	4	4	0,000		25ppm
ZELENA	5	5	5	00,000	± 0.5%	
PLAVA	6	6	6	000,000	± 0.25%	
LJUBIČASTA	7	7	7	0,000,000	± 0.10%	
SIVA	8	8	8		± 0.05%	
BELA	9	9	9			
ZLATNA				: 10	± 5%	
SREBRNA				: 100	± 10%	