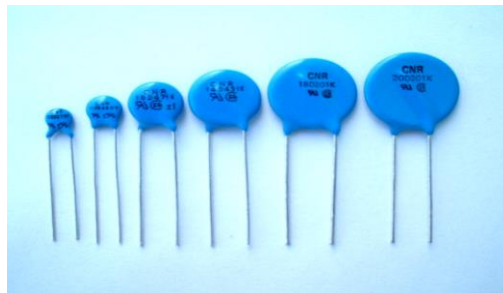


CeNtRa Varistor

Varistor are voltage dependent, nonlinear device which have an electrical behavior similar to back-to-back zener diodes. CNR series zinc oxide varistor are nonlinear resistors, consisting main of zinc oxide and several kinds of metal oxide additive. They are bilateral and symmetrical V-I characteristics curve and unparalleled large peak current capability are used for absorption of transient voltage, suppression of pulse noise and circuit voltage stabilization.



Applications

- Surge Protection in consumer electronics
 - industrial electronics
 - telephone and telecommunication systems
 - automobile equipments
 - measuring and controller systems
 - electronic home appliances
 - gas and petroleum appliances
- Absorption of switching surge from various kinds of relays and electro-magnetic valves.
- Electrostatic discharge an spike noise suppression.
- Protection of various kinds of transistors, diodes, ICs, thyristors, triac semiconductors, and etc.
- Automobile control system such as transistorized ignition system and electronic fuel injection system, and etc.

Features

- Fast response
- Excellent voltage ratio
- High stabilization for circuit voltage
- Unparalleled absorption for transient voltage characteristics
- Bilateral and symmetrical V-I Characteristics curve

Related Standards

- UL1414, UL1449(3rd Edition), CSA, VDE

Explanation of Part Numbers

CNR	1	4	D	4	7	1	K	BTK
Common Code	Element Dia.	Type	Varistor Voltage			Tolerance	Suffix code	
CeNtRa Zinc Oxide Varistor	14 - Φ14.0mm	Disc Type	471=47X10 ¹ =470V			K:±10%		

Space:Standard Straight lead/Bulk Packing

TRS:Straight lead/Tape&Reel Packing

TRK:Type I Crimped lead/Tape&Reel Packing

TRI:Type II Crimped lead/Tape&Reel Packing

TRH:Type III Crimped lead/Tape&Reel Packing

BTS:Straight lead/Flat Box Packing

BTK:Type I lead/Flat Box Packing

BTI:Type II lead/Flat Box packing

BTH:Type III lead/Flat Box Packing

TTS:Straight Cut Lead /Bulk Packing

TTK:Type I Cut Lead /Bulk Packing

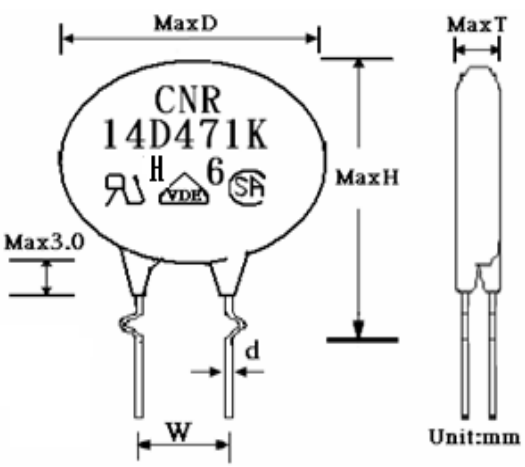
TTI:Type II Cut Lead /Bulk Packing

TTH:Type III Cut Lead /Bulk Packing

SPECIFICATION

PART No.	CNR-14D471K-BTK				
UL REC :UL 1414 ; UL 1449 (3RD EDITION)					
CSA	VDE	ISO 9001	ISO 14001	QC 080000	OHSAS 18001

1. OUTLINE

1.1	APPEARANCE	WITHOUT DIRT & CRACK			
1.2	DIMENSIONS				
ISO 9001	01612Q20820R0M				
ISO14001	01612E20286R0M				
QC 080000	QCO229				
OHSAS 18001	01612S10216R0M				
UL 1414	E165143				
UL 1449	E316325				
CSA	LR 109736-1				
VDE	40008220				
				D(Max)	17.0
				H(Max)	23.5
				T(Max)	5.3
				W	7.5±0.8
				d	0.75±0.05
				CP/EI	

Enclosure Non-Flammable Epoxy Resin (UL 94V-0), Blue,Halogen Free,Laser Marking

Lot No. on the product consists of Factory ID ,year code and month code

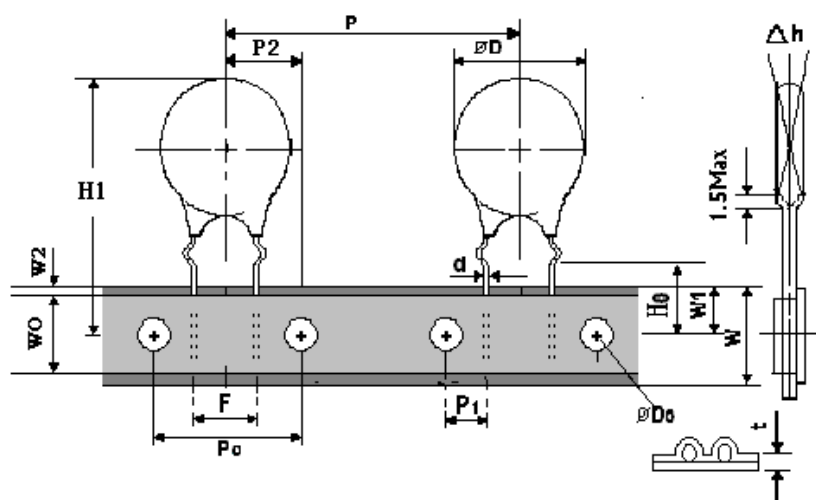
Year Code			Month Code		
W-----2010	G-----2014	L-----2018	1----January	5----May	9----September
X-----2011	H-----2015	M-----2019	2----February	6----June	o----October
Y-----2012	J-----2016	P-----2020	3----March	7----July	n----November
Z-----2013	K-----2017	U-----2021	4----April	8----August	d----December

EX. H 6
 → Month Code
 → Year Code

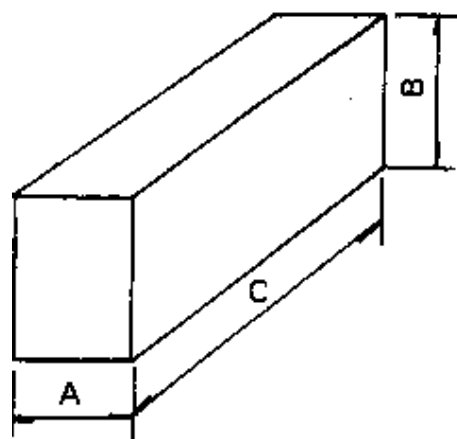
2. ELECTRICAL PARAMETERS

1	Max ALLOWABLE VOLTAGE	AC :300V ; DC 385V	
2	VARISTOR VOLTAGE	V1mA :423V-517V	AT 1.0mA DC
3	RATED WATTAGE	0.6 W	
4	Max CLAMPING VOLTAGE	< 775V (AT 50A)	WAVE FORM 8*20 μ S
5	WITHSTANDING SURGE CURRENT	1 TIME : 4500A	WAVE FORM 8*20 μ S
		2 TIMES :2500A	WAVE FORM 8*20 μ S
6	Max ENERGY	125.0 JOULES	WAVE FORM 10*1000 μ S
7	TEMP COEFFICIENT OF VARISTOR VOLTAGE	< -0.05 %/°C	
8	LEAKAGE CURRENT	<20 μ A	AT 385 V (DC)
9	IMPULSE LIFE	<±10% (V1.0mA)	WAVE FORM 8*20 μ S
10	STORAGE TEMPERATURE RANGE	-40°C~ +125°C	
11	OPERATION AMBIENT TEMPERATURE RANGE	-40°C~ +85°C	

Tape and Reel Specifications



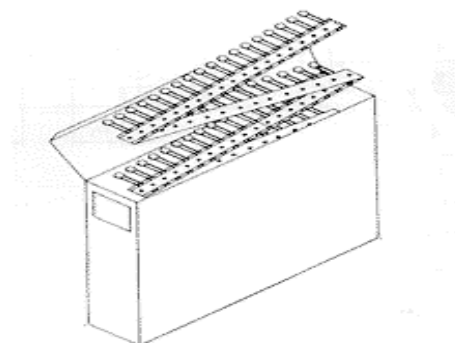
Packaging Specifications



Symbol	PARAMETER	14D
P	Pitch of Component	30.0±1.0
P ₀	Feed Hole Pitch	15.0±0.2
P ₁	Feed Hole Center to Pitch	3.75±0.7
P ₂	Hole Center to Component Center	7.5±0.7
F	Lead to Lead Distance	7.5±0.8
Δh	Deviation Across Tape	2.0Max
W	Tape Width	18.0+1.0
		18.0-0.5
W ₀	Hold Down Tape Width	5.0Min
W ₁	Hole Position	9.0+0.75
		9.0-0.5
W ₂	Hold Down Tape Position	3.0Max
H ₀	Seating Plane Height	16.0±0.5
H ₁	Component Height	40.0Max
D ₀	Feed Hole Diameter	4.0±0.2
t	Total Tape Thickness	0.7±0.2

Unit:mm

FLAT-BOX-PACK



Symbol	14D
A	55Max
B	330Max
C	340Max

Unit:mm

14D	Min. Q'ty	400
	Q'ty/Carton	3200

Unit:pcs