Conformal, Radial Discrete Resistor

The models CNS 020 and CNS 021 resistors incorporate an ultrastable thin film element into the RCK02 form factor thereby extending the existing range capability.

FEATURES

- Incorporates Ultrastable Thin Film Element

TYPICAL PERFORMANCE

▲	ABS
TCR	5
	ABS
TOL	0.02

SCHEMATIC

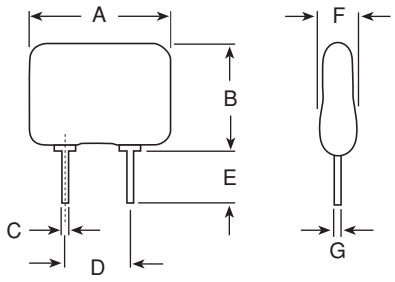
STANDARD ELECTRICAL SPECIFICATIONS

TEST	SPECIFICATIONS	CONDITIONS
MATERIAL	**PASSIVATED NICHROME**	
Resistance Range	100K ohm (Min.) to 10M ohm (Max.)	
Absolute TCR: *Standard	± 10ppm/°C	- 40°C to + 125°C
On Request	± 5ppm/°C	0° to + 70°C
Tolerance Absolute	± 0.01% to ±1%	
Power Rating:	0.5W	@ + 70°C
	0.3W	@ + 125°C
Working Voltage (Max.)	300V	
Operating Temperature Range	- 55°C to + 155°C	

*15ppm/°C for R ≥ 1.5M

DIMENSIONS AND IMPRINTING in inches and millimeters

CNS 020

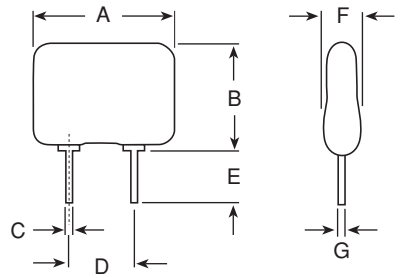


DIMENSION	INCHES	MILLIMETERS
A	0.318	8.10
B	0.260	6.62
C	0.020	0.51
D	0.200	5.08
E	0.120	3.17
F	0.100	2.54
G	0.010	0.25

In Clear: Model, Vishay Logo and Manufacturing Code.
On Back: Ohmic Value (in ohms), Tolerance (in %).

DIMENSIONS AND IMPRINTING in inches and millimeters

CNS 021



DIMENSION	INCHES	MILLIMETERS
A	0.318	8.10
B	0.260	6.62
C	0.020	0.51
D	0.150	3.81
E	0.120	3.17
F	0.100	2.54
G	0.010	0.25

In Clear: Model, Vishay Logo and Manufacturing Code.
On Back: Ohmic Value (in ohms), Tolerance (in %).

THROUGH HOLE

ENVIRONMENTAL TEST

TEST	REQUIREMENTS			CONDITIONS
	NFC 83220 CECC40300	MIL-PRF 55182E	DRIFTS (MAX.)	
Overload	± 0.01%	± 0.05%	0.01%	2.5Un/5s U Max. < 2Un
Temperature Cycling	± 0.01%	± 0.05%	0.01%	-55°C/+ 155°C 5 Cycles CEI 63-2-14 Test No
Terminal Strength	± 0.01%	± 0.02%	0.01%	CEI 68-2-21 Test Ua (Pulling), Ub (Bending) Uc (Twisting)
Resistance to Solder Heat	± 0.01%	± 0.02%	± 0.01%	+ 260°C/10s, CEI 68-2-20A Test T6 (Met 1A)
Vibration	± 0.01%	± 0.02%	0.01%	10Hz to 500Hz 10g. 6 hrs. Met B4; CEI 68-2-6 Test Fc
Climatic Sequence	± 0.05% Insulation Resistance > 10^2M ohm	—	0.05%	- 55°C/+ 155°C 6 Cycles 95% RH RH 85mbar CEI 68-1
Moisture	± 0.05% Insulation Resistance > 10^2M ohm	—	0.02%	56 Days 95% RH + 40°C CEI 68-2-3
High Temperature Storage	± 0.05%	—	0.05%	1000 hrs./+ 155°C" CEI 68-2-20A; Test B

MECHANICAL SPECIFICATIONS

Resistive Material	Nichrome
Substrate Material	Alumina
Terminals	SnPb on Cu Alloy
Protection	Gold Epoxy Coating

How to Order

Series	Model	Ohmic Value	Tolerance
CNS	**020**	**100K ohm**	**±0.02%**