

Precision Metal Film Resistors



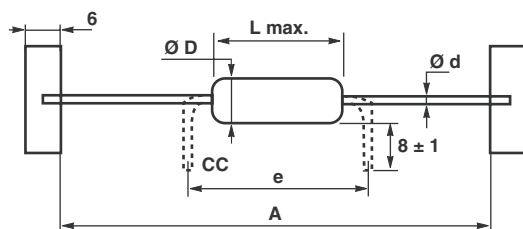
FEATURES

- 0.125 W to 0.5 W at 70 °C
- NFC 83-230/CECC 40 100
- ESA-SCC 4001
- LN2/GAM-T-1
- Wide ohmic range from 1 Ω to 5.7 M Ω
- Good initial precision up to ± 0.1 %
- Operating temperatures:
 - 55 °C to + 155 °C
 - 25 °C to + 85 °C for TCR $\leq \pm 15$ ppm/°C
- Protection: "SPINSEAL®" epoxy
- Termination: Pure Matt Tin



RoHS
COMPLIANT

DIMENSIONS in millimeters



TYPE	Ø D max.	L max.	A ± 1	Ø d	CC e	MAX. UNIT WEIGHT
N.. 3..	1.8	3.9	53	0.5	5.08	0.15 g
N.. 4..	2.5	6.2	53	0.6	NA	0.3 g
N.. 5..	3.3	8.7	53	0.6	NA	0.5 g

TECHNICAL SPECIFICATIONS

MODEL	NT3S	NP3S	NY3	NK3	NT4S	NP4S	NY4	NK4	NT5S	NP5S	NY5	NK5
Power Rating at + 70 °C	0.125 W	0.25 W			0.25 W	0.5 W			0.5 W			
Ohmic Value Range in Relation to: Temperature Coefficient of Resistance, Tolerance	± 0.1 %	100 Ω E 192	-	-	49.9 Ω E 96	E 192	-	-	100 Ω E 96	E 192	-	-
	± 15 ppm/°C	± 0.25 %	200 k Ω	-	499 k Ω	-	-	-	499 k Ω	-	-	-
	± 0.5 %	10 Ω E 96	-	E 192	-	10 Ω E 96	E 192	-	10 Ω E 96	E 192	-	-
	± 1 %	200 k Ω	-	-	499 k Ω	-	-	-	499 k Ω	-	-	-
	± 25 ppm/°C	± 0.1 %	-	100 Ω E 192	-	-	10 Ω	-	-	100 Ω	-	-
		± 0.25 %	-	511 k Ω	-	-	1 M Ω E 96	E 192	-	1 M Ω E 96	E 192	-
		± 0.5 %	-	10 Ω E 96	-	E 192	-	-	-	10 Ω E 96	-	-
	± 50 ppm/°C	± 1 %	-	511 k Ω	-	-	1 M Ω	-	-	1 M Ω	-	-
		± 0.1 %	-	-	-	-	10 Ω E 192	-	-	10 Ω E 192	-	-
		± 0.25 %	-	-	-	-	1 M Ω	-	-	1 M Ω	-	-
	± 100 ppm/°C	± 0.5 %	-	-	10 Ω E 192	-	-	10 Ω E 192	-	-	10 Ω E 192	-
		± 1 %	-	-	1 Ω E 96	-	-	1 Ω E 96	-	-	3.01 Ω E 96	-
		± 2 %	-	-	1 Ω E 24	-	-	1 Ω E 24	-	-	2.7 Ω E 24	-
Limiting Element Voltage VRMS	200 V				350 V				350 V			
Critical Resistance	-	-	160 k Ω	-	490 k Ω	-	245 k Ω	-	245 k Ω	-	-	-
Thermal Resistance	170 °C/W				145 °C/W				110 °C/W			

**OFFICIAL APPROVAL AND PREFERENTIAL LISTS**

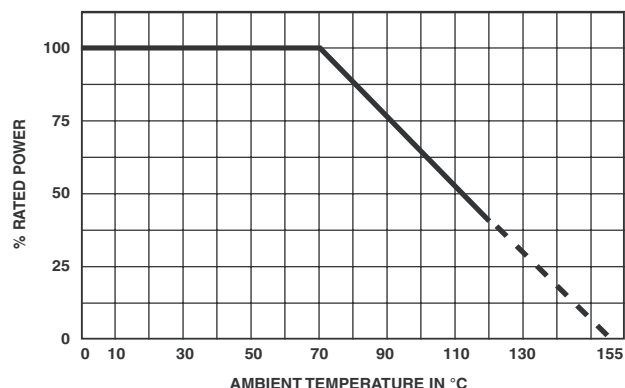
SERIES AND MODEL	SPECIFICATION	DESIGNATION	CECC REFERENCE	QUALIFIED RANGE	TOL $\pm$ %	PN AT + 70 °C W	PREFERENTIAL LISTS			
							BT	CCQ	CNET	GAM
NY3	40 101-002	RS 59Y	EY	10 Ω 301 k Ω	1	0.125		•	•	
	002	RS 48Y	AY			0.063		•	•	•
	803	AC	-			0.063		•		
NK3	40 101-001	RC 9	DU	10 Ω 510 k Ω	2 - 5	0.250		•		
	001	RC 8U	AU			0.125		•	•	•
	802	AV	-	10 Ω 150 k Ω	2 - 5	0.125		•		
NP4S	002	RS 64P	FP	100 Ω 1 M Ω	0.5 - 1	0.250		•	•	
	002	RS 58P	BP			0.125		•	•	
NY4	40 101-002	RS 71Y	GY	10 Ω 1 M Ω	0.5 - 1	0.500		•		
	002	RS 64Y	FY			0.250		•	•	•
	002	RS 58Y	BY			0.125		•	•	•
	803	BC	-			0.125		•		
NK4	40 101-001	RC 32	EU	10 Ω 1 M Ω	2 - 5	0.5		•	•	•
	001	RC 21U	BU			0.25		•	•	•
	802	BV	-			0.25		•		
NY5	40 101-002	RS 69Y	HY	10 Ω 1 M Ω	0.5 - 1	0.5		•		
	002	RS 63Y	CY			0.25		•	•	•
	803	CC	-			0.25		•		
NK5	40 101-001	RC 31U	CU	10 Ω 1 M Ω	2 - 5	0.5		•	•	•
	802	CV	-					•		

PERFORMANCE

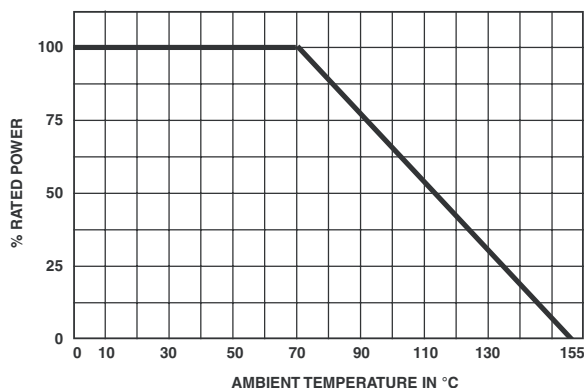
TEST	CONDITIONS	TYPICAL VALUES AND DRIFTS
Load Life at maximum Category Temperature	1000 h at 155 °C IEC 115-1 4.25.3	$\leq \pm 0.2$ %
Short Time Overload	2.5 Pn or 2 Un 2 s for N...3.. 5 s for > N3 IEC 115-1 4.13	$\leq \pm 0.02$ %
Damp Heat Humidity (Steady State)	56 days with low load IEC 115-1 IEC 68-2-3	$\leq \pm 0.2$ %
Rapid Temperature Change	IEC 115-1 4.16 IEC 68-2.14	$\leq \pm 0.04$ %
Climatic Sequence	dry heat damp heat cycle cold low pressure IEC 115-1 4.23	$\leq \pm 0.1$ %
Terminal Strength	pull - twist - 2 bands	$\leq \pm 0.01$ %
Vibration	10 - 500 Hz 10 g	$\leq \pm 0.01$ %
Soldering (Thermal Shock)	+ 260 °C 10 s	$\leq \pm 0.05$ %
Load Life	1000 h at 70 °C cycle 90°/30° IEC 115-1 4.25.1	$\leq \pm 0.15$ %
Shelf Life	1 year ambient temperature	$\leq \pm 0.1$ %

POWER RATING CHARTS

CECC 40 101-001/019 NK3/NK5

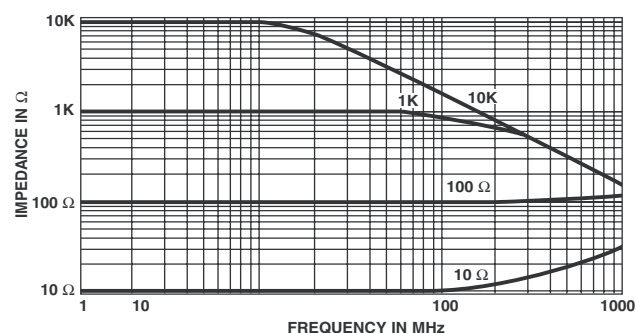


CECC 40 101-003 N4/N5

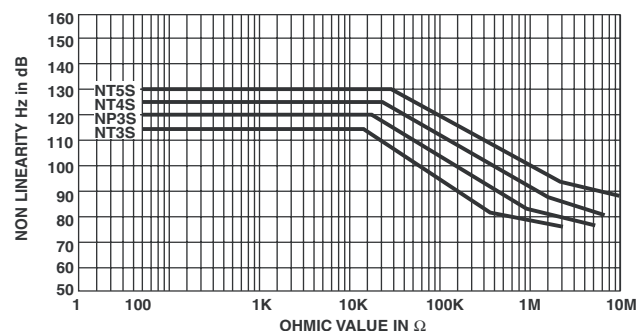


HIGH FREQUENCY

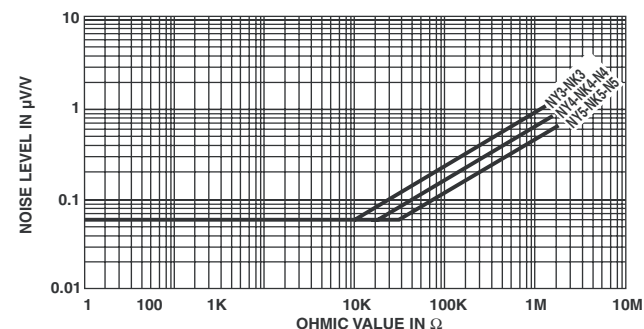
Typical behavior for NK4



THIRD HARMONIQUE

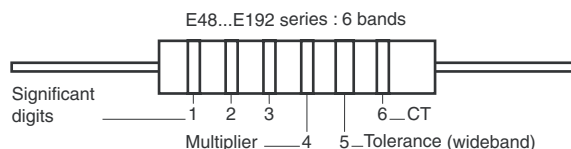


NOISE



MARKING

Resistor color code chart 6, 5 or 4 bands.



COLOR	DIGIT.	MULTIP.	TOL %	CT ppm/°C
Black	0	1		
Brown	1	10	1	
Red	2	10 ²	2	
Orange	3	10 ³		± 15
Yellow	4	10 ⁴		± 25
Green	5	10 ⁵	0.5	
Blue	6	10 ⁶	0.25	± 10
Purple	7	10 ⁷	0.1	± 5
Grey	8	10 ⁸		
White	9	10 ⁹		
Silver		10 ⁻²		
Gold		10 ⁻¹	5	

**TAPE AND REEL**

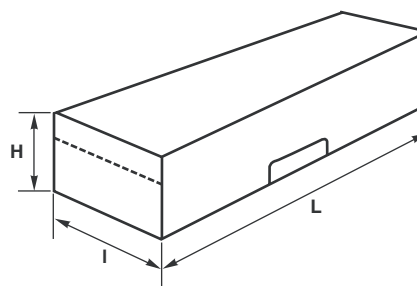
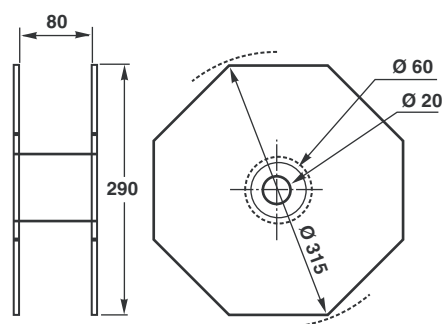
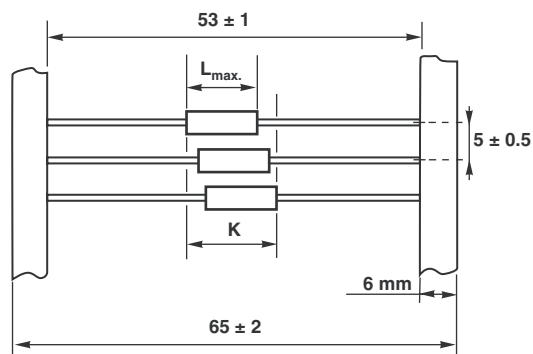
SERIES AND MODEL	QUANTITY PER REEL
NT4S/NP4S	5000
NK4/N4/NY4	5000
SL3	5000
SL4	5000

TAPED IN AMMOPACK

SERIES AND MODEL	QUANTITY PER BOX	BOX DIMENSIONS L x I x H mm ³
NT3S/NP3S	500	260 × 80 × 26
NY3	500	
NK3	1000	
NT4S/NP4S	500	
NY4	500	
NK4	1000	260 × 80 × 37
NK4	1000	340 × 85 × 90
NT5S/NP5S	500	260 × 85 × 28
NK5	500	

TAPED IN BAG

SERIES AND MODEL	QUANTITY PER BAG	BAG DIMENSIONS mm ²
NP3S/NT3S	100	85 × 140
NP4S/NT4S		
NP5S/NT5S		
NY/NT CC	500	

PACKAGING

The resistors are required to be inside a window which is the K dimension.

K being equal to the maximum body length of the resistor + 1.4 mm and being centered as per CEI 286 EIA 296D specification to the tape edges.

ORDERING INFORMATION

T3	XXX	100 k Ω	1 %	AM1000	e3
MODEL	CUSTOM DESIGN	OHMIC VALUE	TOLERANCE	PACKAGING	LEAD (Pb)-FREE

SAP PART NUMBERING GUIDELINES

NY3	10002	F	A22
MODEL	OHMIC VALUE	TOLERANCE	PACKAGING



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