

# SR#N1, HR#N2, HR#N3 SERIES FOLLOWING EEE-INST-002 LEVEL 1, 2, and 3

## QUALITY ASSURANCE PROVISIONS

Every lot undergoes the following inspection and tests.

### GROUP 1

1. Thermal shock before Voltage conditioning, (SR#N1, HR#N2,): MIL-STD-202 Method 107 Condition B (-55/+125°C).
2. Voltage Conditioning at 125°C, SR#N1: 160Hrs, HR#N2: 96Hrs, HR#N3: 48Hrs. Vtest = 2X rated for ≤ 500V, 1.2X rated for 501 to 999V, 1X rated ≥ 1000V.
3. Capacitance (SR#N1, HR#N2, HR#N3): all parts are tested at 25°C and 1 VACRMS in accordance with Method 305 of MIL-STD-202.
4. Dissipation Factor, DF, (SR#N1, HR#N2, HR#N3): Capacitance: all parts are tested at 25°C and 1 VACRMS in accordance with Method 305 of MIL-STD-202
5. Dielectric Withstanding Voltage, DWM, (SR#N1, HR#N2, HR#N3): MIL-STD-202 Method 301. Test is performed at 2.5X rated voltage for rating below 500V.
6. Insulation Resistance 1, (SR#N1, HR#N2, HR#N3): MIL-STD-202 Method 301, room temperature.
7. Insulation Resistance 2, (SR#N1): MIL-STD-202 Method 301, repeat at max. rated temp. (125°C).
8. Percentage Defective Allowed (PDA): SR#N1: 5%, HR#N2: 10%, HR#N3: 20%.
9. Radiographic inspection: For SR#N1 leaded parts only, not applicable for SMD Chips.
10. Visual and Mechanical Examination (SR#N1, HR#N2).

### GROUP 2

- Voltage/Temperature Limit (SR#N1–12(1) pcs, HR#N2 – 6(1) pcs), Not applicable to X7R.
- Temperature Coefficient and Drift (SR#N1- HR#N2), N/A for BX/BR/BQ/BZ/X7R parts.

### GROUP 3

- Terminal Strength: N/A for surface mount chips.
- Resistance to Solder Heat (SR#N1, HR#N2): MIL-STD-202, Method 210 Condition C (chips). Condition G (Leaded).
- Moisture Resistance (SR#N1–12(0), HR#N2 – 6(0)): MIL-STD-202, Method 106. Exception: For size ≤ 0603 test is performed on larger size parts cut from the same wafer. Test voltage is rated voltage or 50V whichever is less.

### GROUP 4

- Humidity Steady State Low Voltage (SR#N1–12(0) pcs, HR#N2–5(0) pcs), MIL-STD-202 Method 103 Condition A and MIL-PRF-123 Group B

### GROUP 5

- Solderability (SR#N1–5(0) pcs, HR#N2–3(0) pcs): MIL-STD-202, Method 208
- Destructive Physical Analysis: (SR#N1): EIA-469 Exception: Use separate pieces for Solderability Test 5(0) and DPA.

### GROUP 6

- Life (at elevated temperature: 125°C), (SR#N1–2000H, 22(0) pcs, HR#N2–1000H, 22(1)) pcs): Vtest = 2X rated for ≤ 500V, 1.2X rated for 501 to 999V, 1X rated ≥ 1000V
- Partial Discharge aka Corona Test for SR#N1 and HR#N2 for voltage rating ≥ 1000V

**MARKING (Optional for sizes 0805 and larger only)** – Parts will not be marked unless marking is specified on the PO. If marking is specified, a color letter will be used per Presidio's chip marking system.

## STANDARD PACKAGING

Product will be packaged in individual waffle trays. Tape and reel option is available.

## DATA PACKAGE

Level/Series	Level 1 Series SR#N1	Level 2 Series HR#N2	Level 3 Series HR#N3
Certificate of Conformity	YES	YES	YES
DPA Report	YES	NO	NO
Group 1 to 6 Data when Applicable	YES	YES	NO

## PART NUMBER EXAMPLE

**HR0402X7R104KENT91(D)#N2**

**PART DESCRIPTION:** HR, 0402, X7R, 0.12µF, ±10%, 10V, Plated SnPb Over Ni Termination, Tape & Reel, Design-In Code (D) for Arizona, Screened following EEE-INST-002 Level 2.

*C OF C AND DATA PACK INCLUDED WITH THE PARTS.*

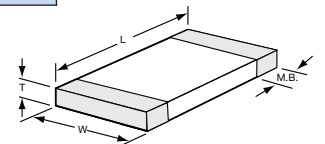
## HOW TO ORDER

See Website for Design-In Codes

**EXAMPLE: HR0402X7R104KENT91(D)#N2**

HR	0402	X7R	104	K	E	NT9	1	(D)	#N2
Prefix	Size	Dielectric	Capacitance Code	Tolerance Code	Voltage Code	Termination Code	Packaging Code	Design-In Code	Suffix
SR* HR	See Page 3 (Other Sizes Available)	X7R NPO (Other Dielectrics Available)	Two significant figures followed by the number of zeros. Example: R05 = 0.05pF 0R1 = 0.1 pF 1R0 = 1.0 pF 100 = 10 pF 101 = 100 pF 102 = 1000 pF 103 = .01 µF 104 = .10 µF 105 = 1.0 µF	A = ± .05pF < 10pF B = ± .10pF < 10pF C = ± .25pF < 10pF D = ± .50pF < 10pF E = ± 0.5% ≥ 10pF F = ± 1% ≥ 10pF G = ± 2% ≥ 10pF J = ± 5% ≥ 10pF K = ± 10% L = -10% / +20% M = ± 20%	B = 5 VDC E = 10 VDC F = 12 VDC G = 16 VDC 1 = 25 VDC 2 = 50 VDC 3 = 100 VDC 4 = 200 VDC <b>Other Voltages Available</b> Examples: 63, 75, 150, 250 VDC, etc.	NT9 = <b>Plated SnPb over Ni</b> Min 4% Pb P = <b>PdAg</b> (Thick Film) H = <b>100% Au</b> (Thick Film) NG* = <b>Plated Au over Ni</b> P & H are non-magnetic * for legacy parts	1 = Reel, 7", plastic tape, unmarked 2 = Reel, 7", plastic tape, marked 5 = Waffle, unmarked 6 = Waffle, marked	See Back Page (Optional)	N1* N2 N3

\*SR prefix is used with #N1 suffix only.



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