## FEATURES

- Stable and reliable in performances
- Compact size
- RoHS compliant

## APPLICATIONS
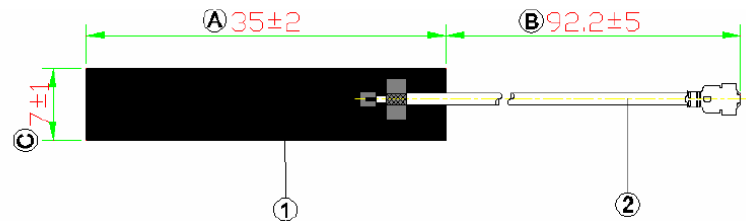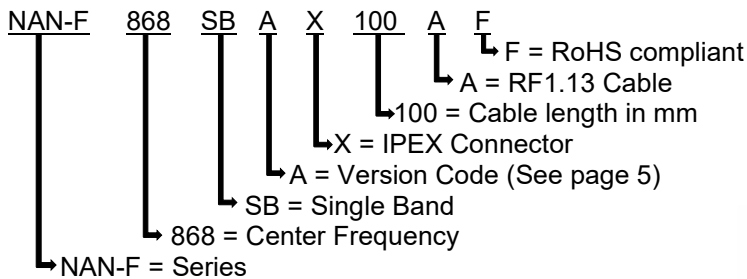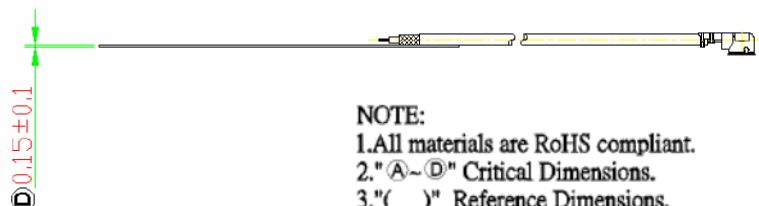
- ISM 868 Band
- Smart meters
- Wireless alarm and security system
- Industrial monitoring and control
- IOT applications

## SPECIFICATIONS

| Electrical | |
|---|---|
| Frequency Range | 863 ~ 870 MHz |
| Center Frequency | 868 MHz |
| Polarization | Linear |
| Peak Gain | 1.9 dBi (typ.) |
| V.S.W.R | 2.0 Max |
| Efficiency | 61.1% (typ.) |
| Impedance | 50$\Omega$ |
| **Dimensions (mm):** | |
| Body Length (A) | 35 ± 2.0 |
| Width (C) | 7.0 ± 1.0 |
| Thickness (D) | 0.15 ± 0.1 |
| Cable Length | 100 |
| Cable Type | RF1.13 |
| Connector Type | IPEX |

NAN-F   868   SB   A   X   100   A   F

- F = RoHS compliant
- A = RF1.13 Cable
- 100 = Cable length in mm
- X = IPEX Connector
- A = Version Code (See page 5)
- SB = Single Band
- 868 = Center Frequency
- NAN-F = Series

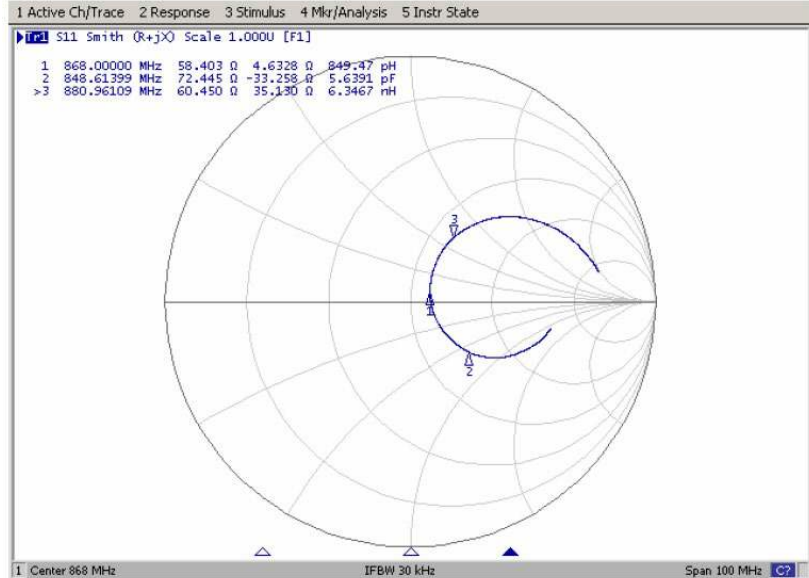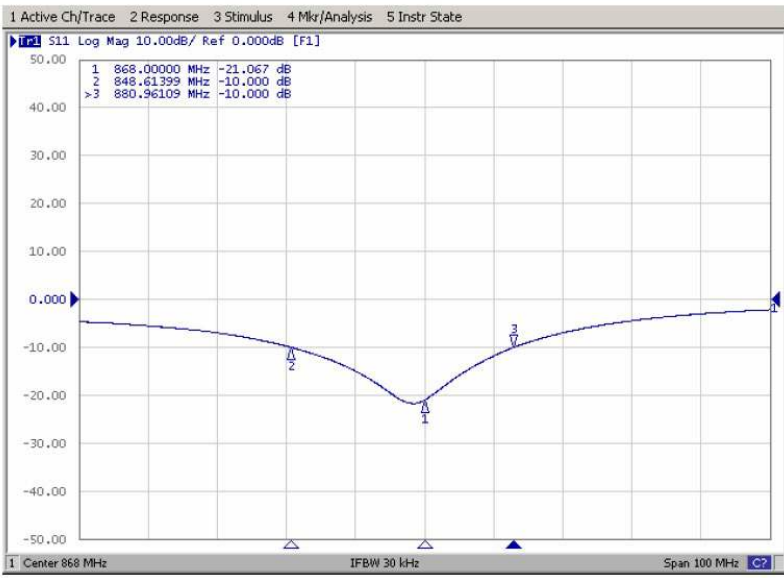| Item | Name | Material | Color |
|---|---|---|---|
| 1 | NAN-F_FPC | PI | Black |
| 2 | I-PEX & RF1.13 | FEP | Gray |



NOTE:
1. All materials are RoHS compliant.
2. "Ⓐ~Ⓓ" Critical Dimensions.
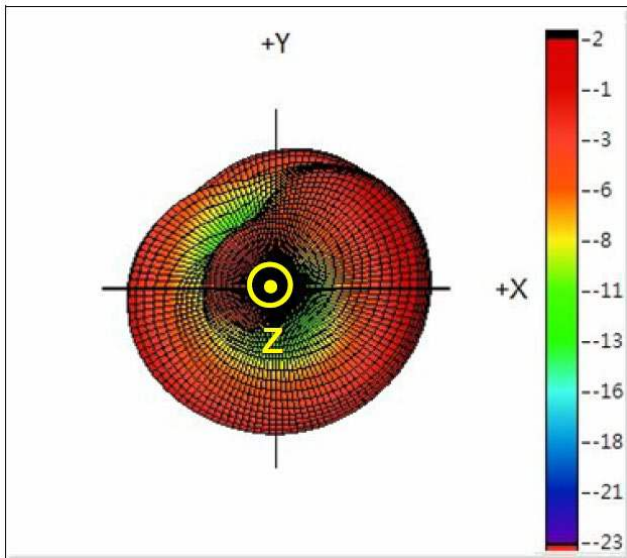3. "(  )" Reference Dimensions.
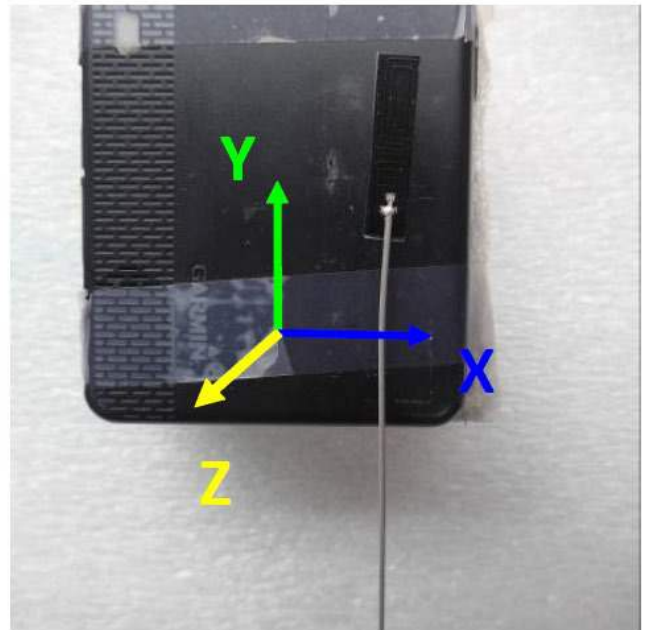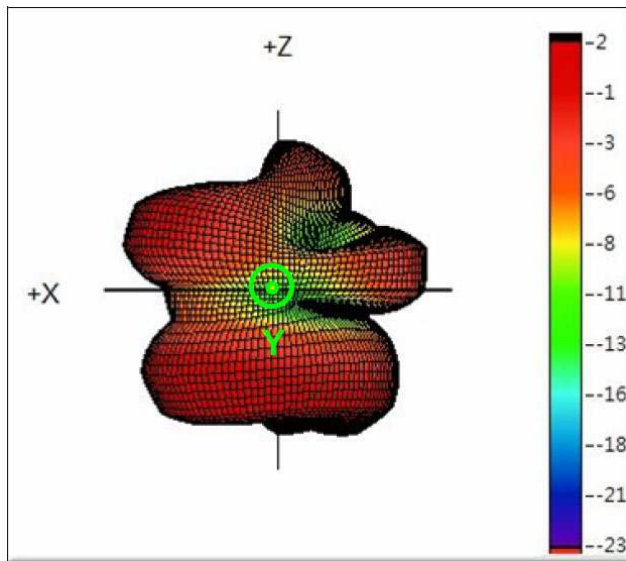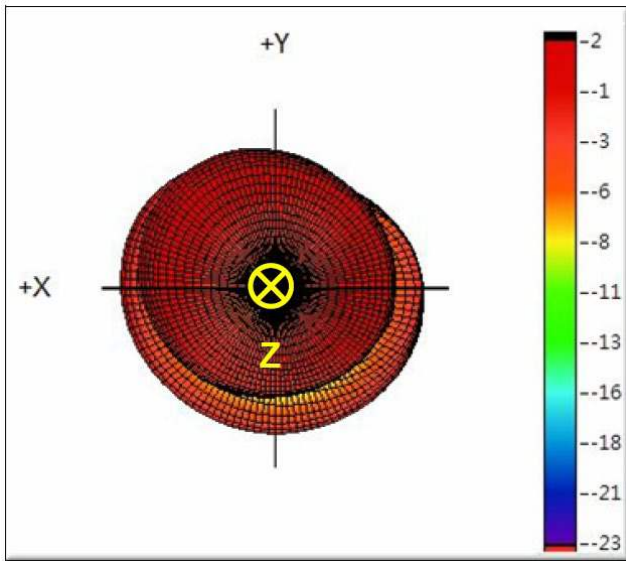
## RETURN LOSS AND SMITH CHART

Return Loss



Smith Chart
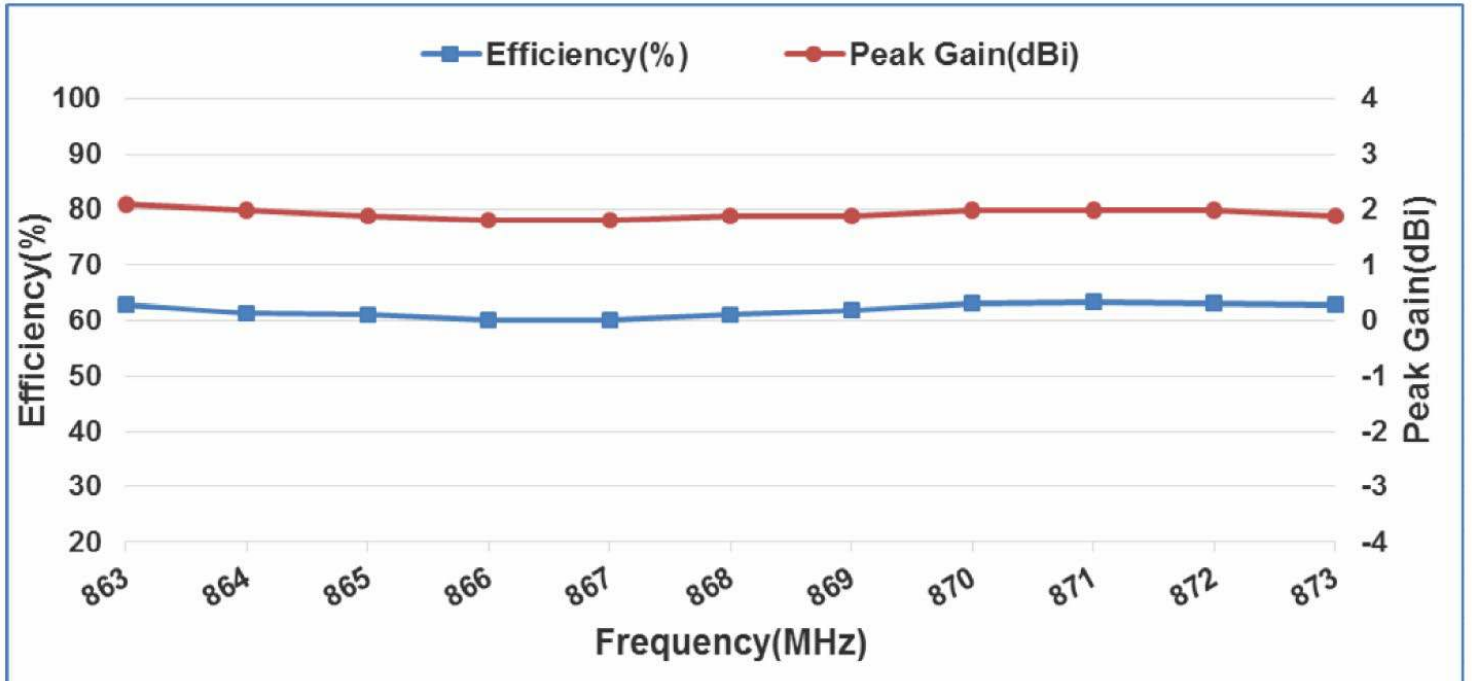


## RADIATION PATTERNS

**3D Gain Patterns @ 868 MHz**

**EFFICIENCY TABLE**

| Frequency(MHz) | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Efficiency(dB) | -2.0 | -2.1 | -2.2 | -2.2 | -2.2 | -2.1 | -2.1 | -2.0 | -2.0 | -2.0 | -2.0 |
| Efficiency (%) | 62.8 | 61.4 | 60.9 | 60.1 | 60.1 | 61.1 | 61.9 | 63.1 | 63.4 | 63.1 | 62.7 |
| Peak Gain (dBi) | 2.1 | 2.0 | 1.9 | 1.8 | 1.8 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 1.9 |

## EFFICIENCY VS. FREQUENCY

## Version History and Status

| Version | Date Issued | Details | Status |
|---------|-------------|---------|--------|
| **A** | Sept 29th, 2021 | Initial Release | Supported |
| | | | |
| | | | |
| | | | |
| | | | |

**Please reach out to NIC for any customization requests and other inquiries:**
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- Compliance Support: rohs@niccomp.com