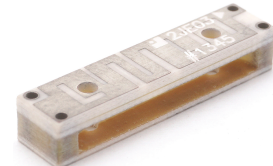


Multiband Chip Antenna

ACAJ-109-T



RoHS / RoHS II Compliant



24.0 x 5.5 x 4.4 mm

Moisture Sensitivity Level (MSL) – MSL = 1

FEATURES:

- Passive Penta-Band antenna (824MHz ~ 2170MHz)
- Covering GSM850, GSM900, DCS, PCS, & UMTS
- SMA mount, Reflowable to 260 degrees C max.
- Dimensions (24.0mm x 5.5mm x 4.4mm)
- Peak Gain variable across bands from 1.3 ~ 6.4dBi
- VSWR 3.0:1 Max (measured on matched EV board)
- Impedance 50 Ohms
- Linear Polarization / Omni-directional azimuth pattern
- RoHS/RoHS II compliant
- 2J Technology

APPLICATIONS:

- GSM850/900MHz
- DCS
- PCS
- UMTS
- Embedded applications

STANDARD SPECIFICATIONS

Description

The ACAJ-109-T product is a multi-band antenna that can be tuned to different bands by modifying its matching circuit. The antenna is constructed from a dielectric ceramic material with Ag patterns to form the antenna performance.

Electrical Characteristics for GSM850

| ITEM | | SPECIFICATION | | | |
|-----------------------|---------|------------------|------|------|------|
| Frequency Range | | 824 ~ 894MHz | | | |
| VSWR | | 3.5: 1 Max | | | |
| Polarization | | Linear | | | |
| Azimuth Beam Pattern | | Omni-directional | | | |
| Impedance | | 50Ω | | | |
| Operating Temperature | | -35°C to + 85°C | | | |
| Frequency [MHz] | | 824 | 849 | 869 | 894 |
| Gain [dBi] | Peak | -0.3 | -0.2 | 0.4 | 1.3 |
| | Average | -3.7 | -3.6 | -3.3 | -2.5 |
| Efficiency [%] | | 42.4 | 43.8 | 47.1 | 56.1 |

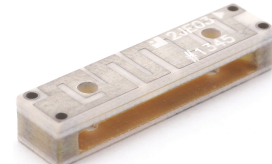
Electrical Characteristics for GSM900

| ITEM | | SPECIFICATION | | | |
|-----------------------|---------|------------------|------|------|------|
| Frequency Range | | 880 ~ 960MHz | | | |
| VSWR | | 3.5: 1 Max | | | |
| Polarization | | Linear | | | |
| Azimuth Beam Pattern | | Omni-directional | | | |
| Impedance | | 50Ω | | | |
| Operating Temperature | | -35°C to + 85°C | | | |
| Frequency [MHz] | | 880 | 915 | 925 | 960 |
| Gain [dBi] | Peak | 1.5 | 2.2 | 2.4 | 1.8 |
| | Average | -2.4 | -1.9 | -1.8 | -2.3 |
| Efficiency [%] | | 57.3 | 64.6 | 65.8 | 58.2 |

Multiband Chip Antenna

ACAJ-109-T

 RoHS / RoHS II Compliant 



24.0 x 5.5 x 4.4 mm

STANDARD SPECIFICATIONS

Electrical Characteristics for DCS1800

| ITEM | | SPECIFICATION | | | |
|-----------------------|---------|------------------|------|------|------|
| Frequency Range | | 1710 ~ 1880MHz | | | |
| VSWR | | 3.0 : 1 Max | | | |
| Polarization | | Linear | | | |
| Azimuth Beam Pattern | | Omni-directional | | | |
| Impedance | | 50Ω | | | |
| Operating Temperature | | -35°C to + 85°C | | | |
| Frequency [MHz] | | 1710 | 1785 | 1805 | 1880 |
| Gain [dBi] | Peak | 6.4 | 5.8 | 6.1 | 5.4 |
| | Average | -0.4 | -0.9 | -0.6 | -1.1 |
| Efficiency [%] | | 90.9 | 80.7 | 86.2 | 76.8 |

Electrical Characteristics for PCS1900

| ITEM | | SPECIFICATION | | | |
|-----------------------|---------|------------------|------|------|------|
| Frequency Range | | 1850 ~ 1990MHz | | | |
| VSWR | | 3.0 : 1 Max | | | |
| Polarization | | Linear | | | |
| Azimuth Beam Pattern | | Omni-directional | | | |
| Impedance | | 50Ω | | | |
| Operating Temperature | | -35°C to + 85°C | | | |
| Frequency [MHz] | | 1850 | 1910 | 1930 | 1990 |
| Gain [dBi] | Peak | 5.6 | 5.9 | 5.8 | 5.5 |
| | Average | -0.8 | -0.5 | -0.5 | -0.6 |
| Efficiency [%] | | 84.0 | 89.8 | 88.6 | 86.7 |

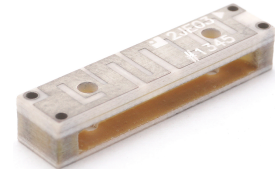
Electrical Characteristics for UMTS2100

| ITEM | | SPECIFICATION | | | |
|-----------------------|---------|------------------|------|------|------|
| Frequency Range | | 920~2170MHz | | | |
| VSWR | | 3.0 : 1 Max | | | |
| Polarization | | Linear | | | |
| Azimuth Beam Pattern | | Omni-directional | | | |
| Impedance | | 50Ω | | | |
| Operating Temperature | | -35°C to + 85°C | | | |
| Frequency [MHz] | | 1920 | 1980 | 2110 | 2170 |
| Gain [dBi] | Peak | 4.8 | 4.5 | 4.6 | 4.5 |
| | Average | -0.7 | -0.9 | -0.5 | -0.2 |
| Efficiency [%] | | 84.9 | 82.1 | 89.5 | 95.4 |

Multiband Chip Antenna

ACAJ-109-T

Pb | RoHS / RoHS II Compliant | 



24.0 x 5.5 x 4.4 mm

PART IDENTIFICATION:

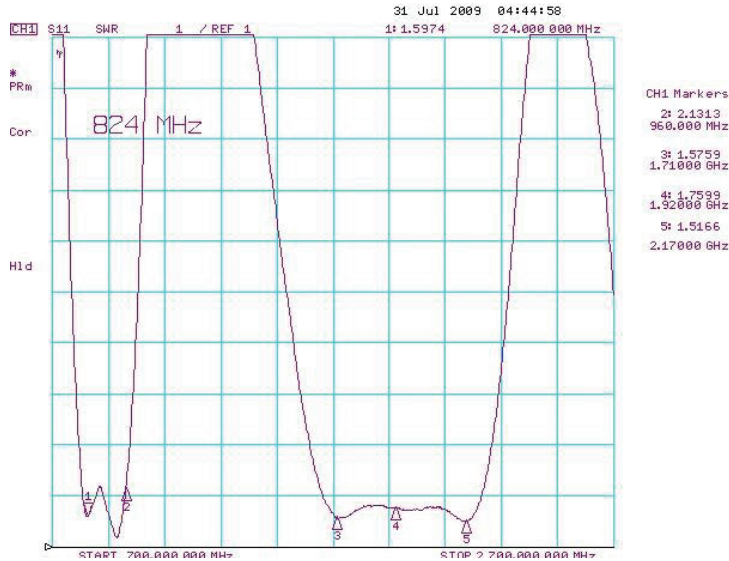
ACAJ-109-

Packaging

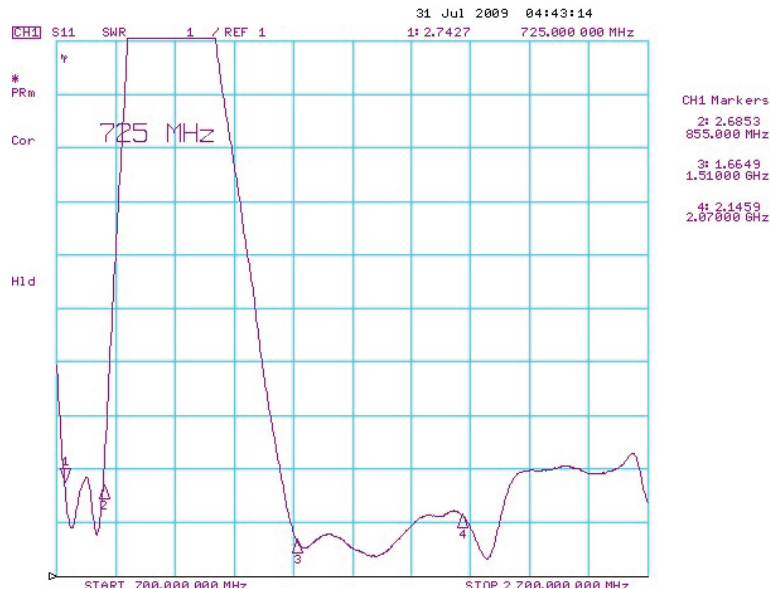
Blank: Bulk

T: Tape and Reel

S11 (VSWR)- Penta Band (GSM850&900, DCS, PCS, UMTS)



VSWR on EV Board

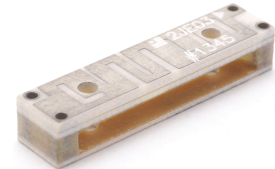


VSWR @ Manual Jig

Multiband Chip Antenna

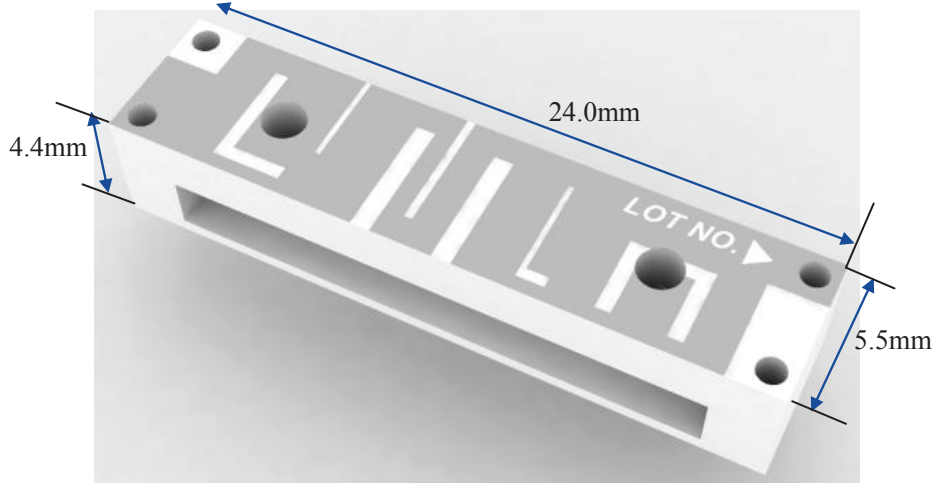
ACAJ-109-T

RoHS / RoHS II Compliant



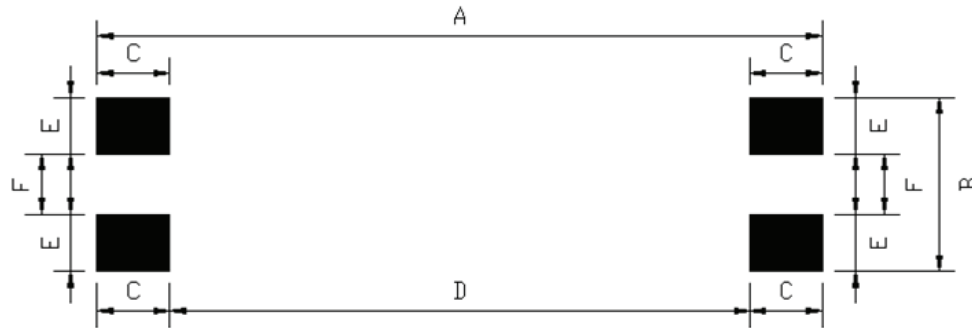
24.0 x 5.5 x 4.4 mm

OUTLINE DIMENSION:



Tolerance: ± 0.15

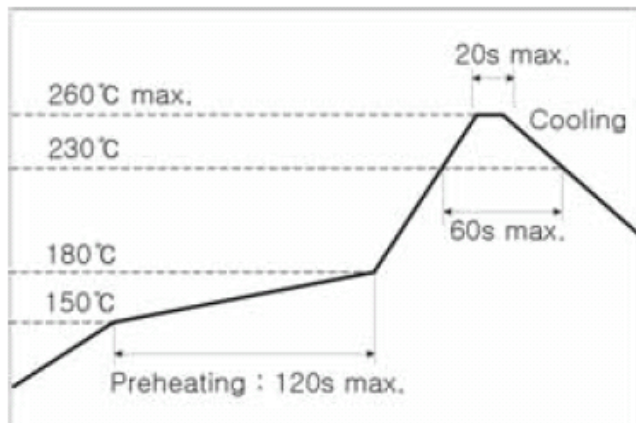
Recommended Land Pattern



| A | B | C | D | E | F |
|------|-----|-----|------|-----|-----|
| 25.0 | 5.5 | 2.3 | 20.4 | 1.8 | 1.9 |

Unit: mm.1

REFLOW PROFILE:

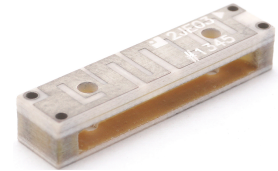


This product is designed for reflow soldering only. Do not use flow (wave) soldering. Use non-activated flux (Cl content 0.2% max.) Follow the recommended soldering conditions to avoid damage. Reflow-cycle is max. 3 times.

Multiband Chip Antenna

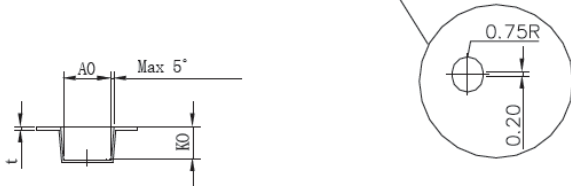
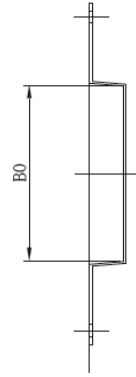
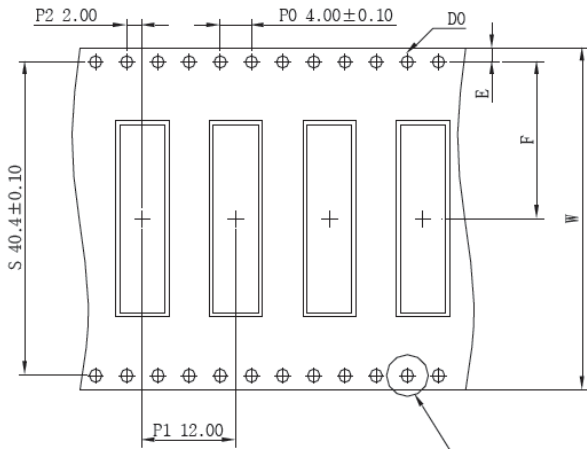
ACAJ-109-T

 RoHS / RoHS II Compliant 

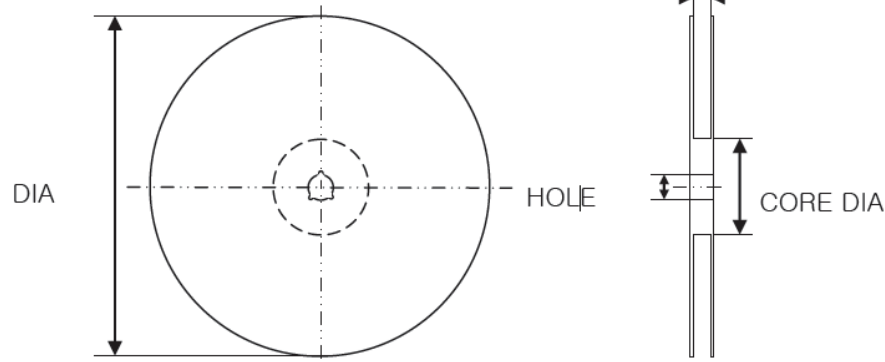


24.0 x 5.5 x 4.4 mm

TAPE & REEL:



| | | | |
|----|------------|---|-------------|
| A0 | 5.80±0.20 | E | 1.75±0.10 |
| B0 | 24.30±0.20 | F | 20.20± 0.20 |
| K0 | 4.60±0.20 | W | 44.00±0.30 |
| D0 | 1.55±0.05 | t | 0.40±0.05 |



| Item | Size (mm) |
|----------|------------|
| DIA | 330.0 ± 2 |
| WIDTH | 45.5 ± 0.5 |
| CORE DIA | 100.0 ± 1 |
| HOLE | 13.0 ± 0.3 |

Package Quantity: 1000units/reel

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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