



## Passive GNSS/GPS/L1/L2/L5/L6 Surface Mount Compact Ceramic Loop Antenna

### Description

#### High Efficiency, Small Footprint Embedded Loop Antenna for Centimeter-Level Accuracy

The 2JL66 passive GNSS 5x3x0.5mm ceramic antenna is ideal for applications where high precision geolocation is needed. This antenna works with GPS L1, L2, L5, and L6 bands and is offered in an extremely small surface-mount package. The 2JL66 is a unique embedded ceramic miniature loop antenna designed for centimeter-level accuracy. Additional GNSS systems coverage includes GPS, GLONASS, BeiDou, Galileo, IRNSS, and QZSS. Applications are ideal for compact high precision automotive navigation or asset tracking devices where board space is at a premium. The 2JL66 is one of the smallest combination embedded antennas available worldwide.

This multi-band GNSS antenna was designed with a wide bandwidth to maintain high efficiency and reception stability on all GNSS bands from 1176MHz to 1606MHz. The antenna offers efficiencies of up to 78.6%, depending on the band used. With a peak gain of 2.0-2.6dBi, the gain performance compares with the ranges of much larger patch antennas. This antenna is right-handed circularly polarized (RHCP). These features make it ideal in rejecting multipath fading and interference, thus improving the signal strength. The overall performance is extremely reliable and delivers stable efficiency and radiation pattern, allowing this antenna to be used in a large variety of devices.

Suggested applications include:

#### Installation / Environmental

The 2JL66 is a compact and easy-to-integrate ceramic antenna, manufactured without any hazardous materials and is REACH and RoHS compliant. This is a surface mount antenna that is ground plane dependent and requires a ground plane of 80 x 40 mm.

Technologies GPS/Glonass/BeiDou/QZSS/Galileo/IRNSS/SBAS/L1L2L5L6

Bandwidth (MHz) 1176-1208, 1227-1246, 1268-1279, 1561-1606

Bands L5, L2, L6, L1

Frequency 1176.45, 1207.14 / 1227.6, 1246.00 / 1268.52, 1278.75 / 1561.09, 1575.42, 1602.00

Standards GPS(L5), BeiDou(B2a, B2b), QZSS(L5), Galileo(E5a), IRNSS(L5) / GPS(L2C), GLONASS(L2OF), QZSS(L2C) / GPS(L6), BeiDou(B3), QZSS(L6), Galileo(E6) / GPS(L1C), GLONASS(L1OF), BeiDou(B1), QZSS(L1C), Galileo(E1), SBAS (L1)

Return Loss (dB) ~-12.8, ~-10.6, ~-6.6, ~-12.6

VSWR ~1.8:1, ~1.9:1, ~2.8:1, ~1.6:1

Efficiency (%) ~70.6, ~67.4, ~65.3, ~78.6

Passive Peak Gain (dBi) ~-2.5, ~-2.0, ~-2.0, ~-2.6

Average Gain (dB) ~-1.5, ~-1.7, ~-2.1, ~-1.0

Impedance (Ohm) 50

Radiation Pattern Hemispherical

Polarization RHCP

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