

# 2.3 GHz Satellite Radio Ceramic Chip Antenna

Ground cleared under antenna 4.00 x 4.25 mm. Pulse Part Number: W3017



## Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (3.2 x 1.6 x 1.1 mm)
- Low weight (33 mg)
- Lead free materials
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

## Applications

- Satellite radio
- 2.320 – 2.345 GHz

## Electrical specifications @ +25 °C

*Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size.*

## 2.3GHz Satellite Radio

Typical performance (Test board size 80 x 37 mm, PWB ground clearance area 4.00 x 4.25 mm)

Frequency Range [MHz]	LHCP Gain [dBic]	Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [ $\Omega$ ]	Operating Temperature [°C]
2320–2345	-0.1 (Peak) -0.6 (Band edges)	2.7 (Peak) 2.4 (Band edges)	80 / -1.0 (Peak) 75 / -1.2 (Band edges)	-12	50	-40 to +85

### Pulse Finland Oy

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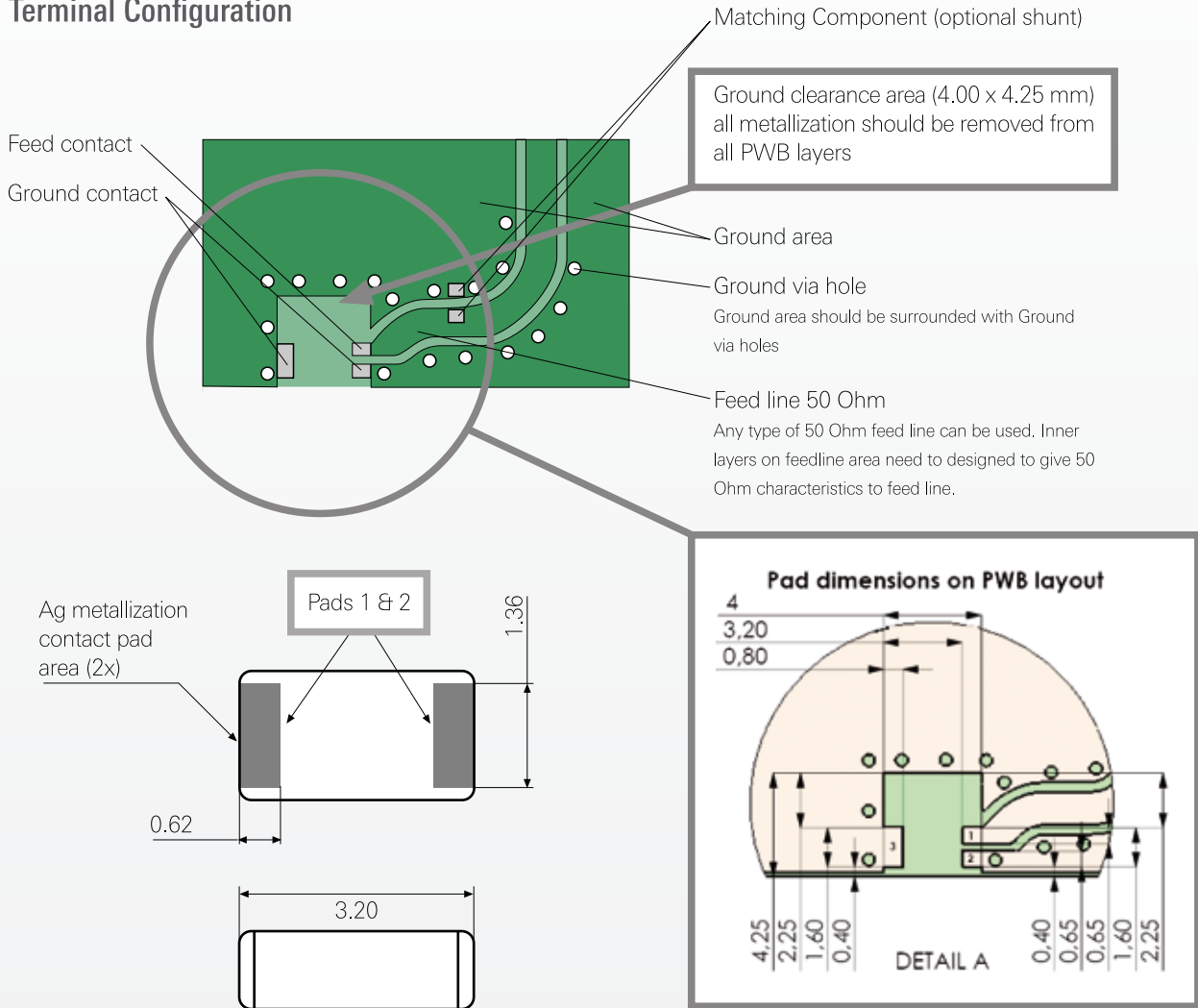
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## Terminal Configuration



## Antenna features

No.	Terminal name	Terminal Dimensions
1	Feed / GND	0.62 x 1.36 mm
2	Feed / GND	0.62 x 1.36 mm

Antenna is symmetrical.  
Either of terminals 1 or 2 can be feed / GND

## PWB features

No.	Terminal name	Terminal Dimensions
1	Feed	0.8 x 0.65 mm
2	GND	0.8 x 0.65 mm
3	GND	0.8 x 1.60 mm

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## Typical Electrical Characteristics (T=25 °C)

Measured on the 80 x 37 mm test board without matching circuit and in antenna position 1 on PWB layout.

Typical Return Loss S11/ impedance, free space efficiency and gain.

### Satellite Radio 2.320–2.345 GHz

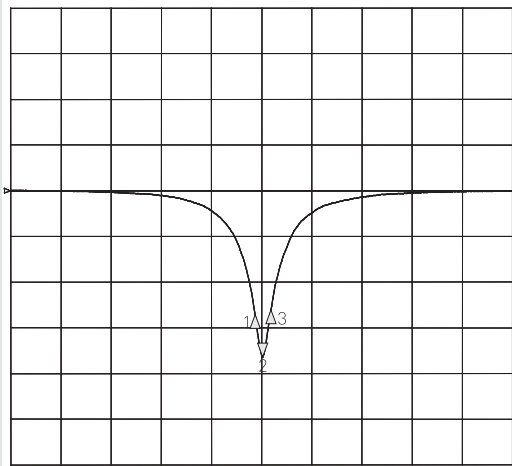
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CH1 Markers

- 1. -13.744 dB 2.32000 GHz
- 2. -18.188 dB 2.33200 000 MHz
- 3. -13.050 dB 2.34500 GHz

CH1 S11&LOG

5 dB/REF 0 dB



CENTER 2.330.000.000 MHz

SPAN 800.000.000 MHz

### Satellite Radio 2.320–2.345 GHz

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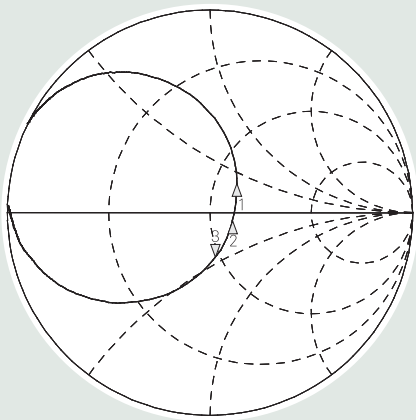
- |             |           |                 |
|-------------|-----------|-----------------|
| 1. 62.322 Ω | 18.084 Ω  | 2.32000 GHz     |
| 2. 62.434 Ω | -4.7949 Ω | 2.33200 GHz     |
| 3. 47.324 Ω | -22.244 Ω | 3.0511 pF       |
|             |           | 2.34500 000 MHz |

CH1 S11&I U FS

PRm

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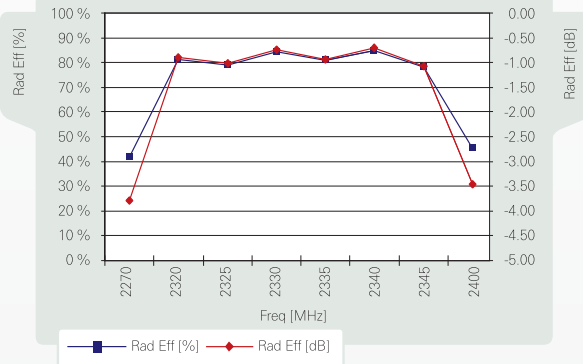
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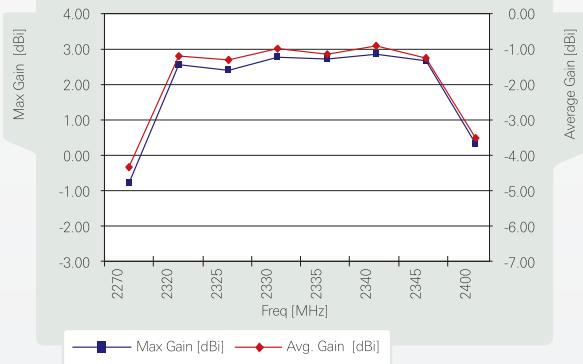
CENTER 2.330.000.000 MHz

SPAN 800.000.000 MHz

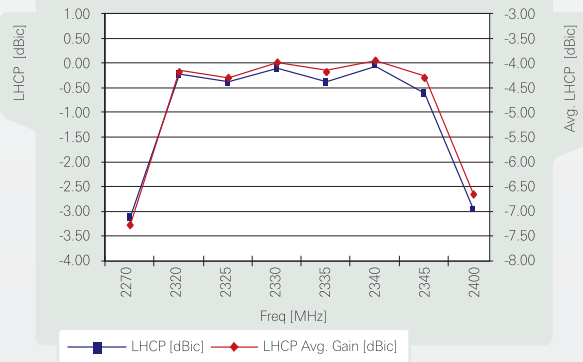
### 2.3 GHz Satellite Radio



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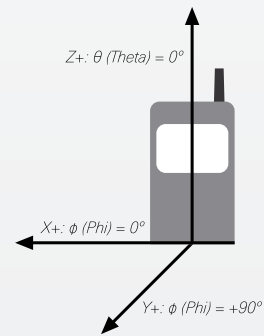
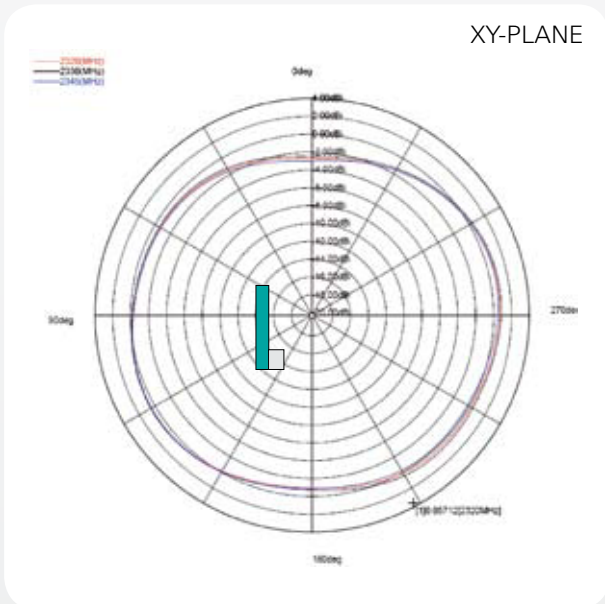
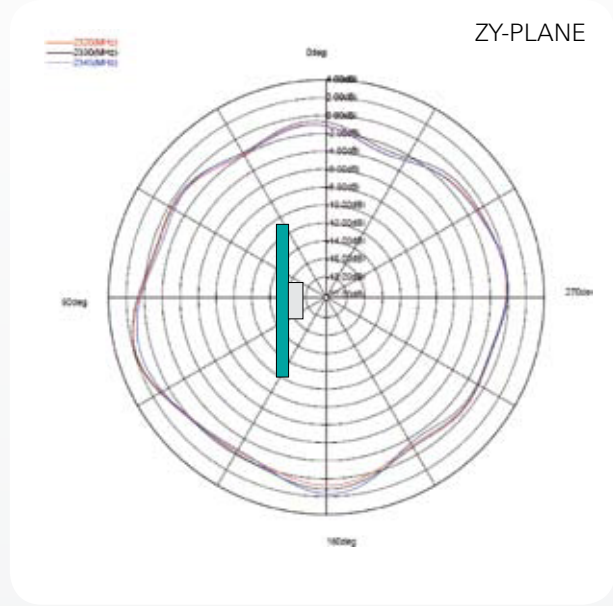
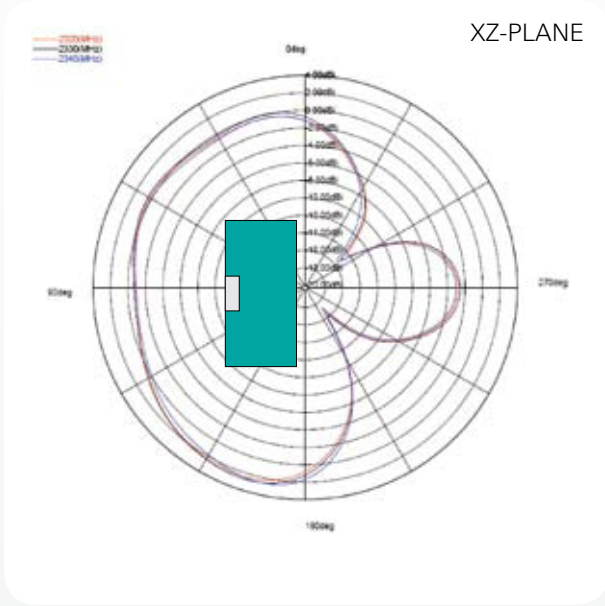
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# 2.3 GHz Satellite Radio Ceramic Chip Antenna

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## Typical Free space Radiation Patterns



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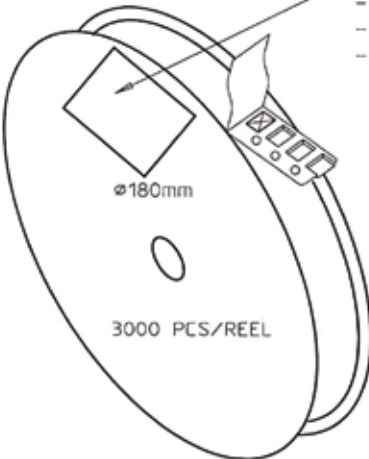
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# 2.3 GHz Satellite Radio Ceramic Chip Antenna

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## Packing Form



∅180mm  
3000 PCS/REEL

**REEL LABEL INFORMATION:**

- TRACEABILITY
- QUANTITY
- PRODUCT CODE

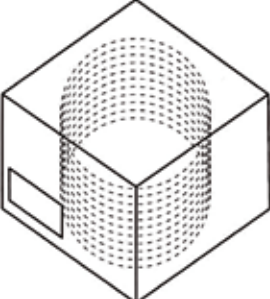
**CARRIER TAPE H85-00125**  
width=8,00 depth=1,22  
**COVER TAPE H85-00126**  
width=5,60

**LENGTH OF TAPE:**

- Leader section: 50 empty cavities before component section
- Trailer section: 25 empty cavities after component section.

Empty part cavities at leader and trailer section of the tape must be sealed with top cover tape.

BOX H85-00128 (182x182x132)	1 pcs
- LABEL	1 pcs/BOX
REEL H85-00127 (D180, W12)	10 pcs
- REEL LABEL	1 pcs/REEL



<b>MATERIAL</b>																																														
<b>HANDLINGS</b>																																														
<b>LK Products</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"><b>RATIO</b></td> <td style="width: 15%;">DRWN</td> <td style="width: 15%;">010305</td> <td style="width: 15%;">PeHa</td> <td style="width: 10%;">H</td> </tr> <tr> <td></td> <td>DGNER</td> <td></td> <td></td> <td>G</td> </tr> <tr> <td></td> <td>CHKD</td> <td></td> <td></td> <td>E</td> </tr> <tr> <td></td> <td>APPRD</td> <td></td> <td></td> <td>E</td> </tr> <tr> <td></td> <td>APPRD BY</td> <td></td> <td></td> <td>D</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>C</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>B</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>A</td> </tr> <tr> <td></td> <td>VERSION</td> <td></td> <td></td> <td>MOD/DATE/NAME</td> </tr> </table>	<b>RATIO</b>	DRWN	010305	PeHa	H		DGNER			G		CHKD			E		APPRD			E		APPRD BY			D					C					B					A		VERSION			MOD/DATE/NAME
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<b>DENOMINATION</b>	PACKING FORM																																													

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