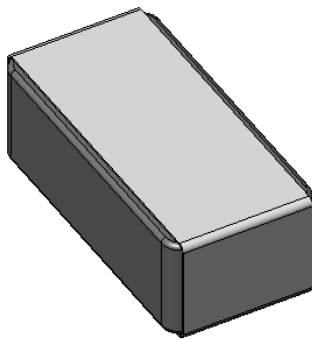


Monopole Antenna:GPS, BT, WLAN, WiFi

Ceramic Chip Antenna (ground cleared under antenna)

Pulse Part Number: **W3043**



Features

- Multipurpose for various frequency applications
- Compact size W x L x H (3.2 x 1.6 x 1.1 mm)
- Low weight (33 mg)
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

Applications

- GPS
- Bluetooth, WLAN, WiFi
- IEEE 802.11b/g
- ZigBee IEEE 802.15.4
- 2.4 GHz WLAN
- 2.4 GHz ISM Band Systems

Electrical specifications @ +25 °C

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

GPS: W3043

Typical performance (test board size 37x20 mm, PWB ground clearance area 17 x 20 mm)

Frequency Range [MHz]	Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
1575.42	+0,35	43 / -3,67	-15	50	-40 to +85

Bluetooth, WLAN, WiFi, 2.4GHz: W3043

Typical performance (test board size 37x20 mm, PWB ground clearance area 17 x 20 mm)

Frequency Range [MHz]	Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
2400 – 2483.5	+4	70 / -1.55	-12	50	-40 to +85

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Domicile: Kempele
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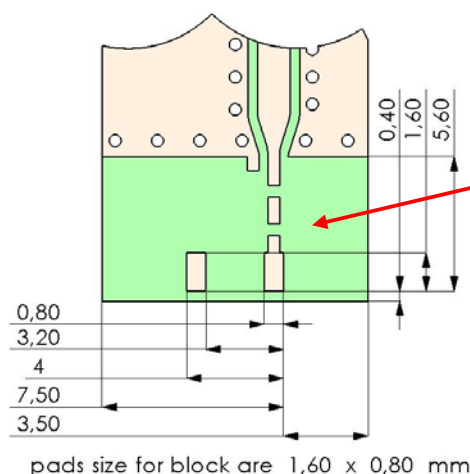
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W3043

Terminal Configuration

PWB Layout

Pad dimensions in top copper

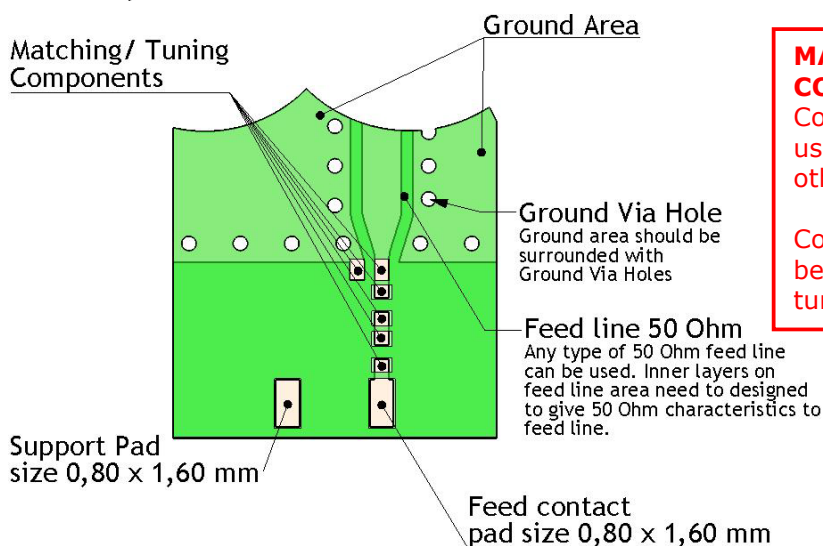


GROUND CLEARANCE AREA

All metallization should be removed from all PWB layers

Clearance area dimensions can be adjusted to available board space

PWB manufacturing requirements according to IPC-A-600 revision G or similar



MATCHING/TUNING COMPONENTS

Component values depend on used ground clearance area and other device mechanics

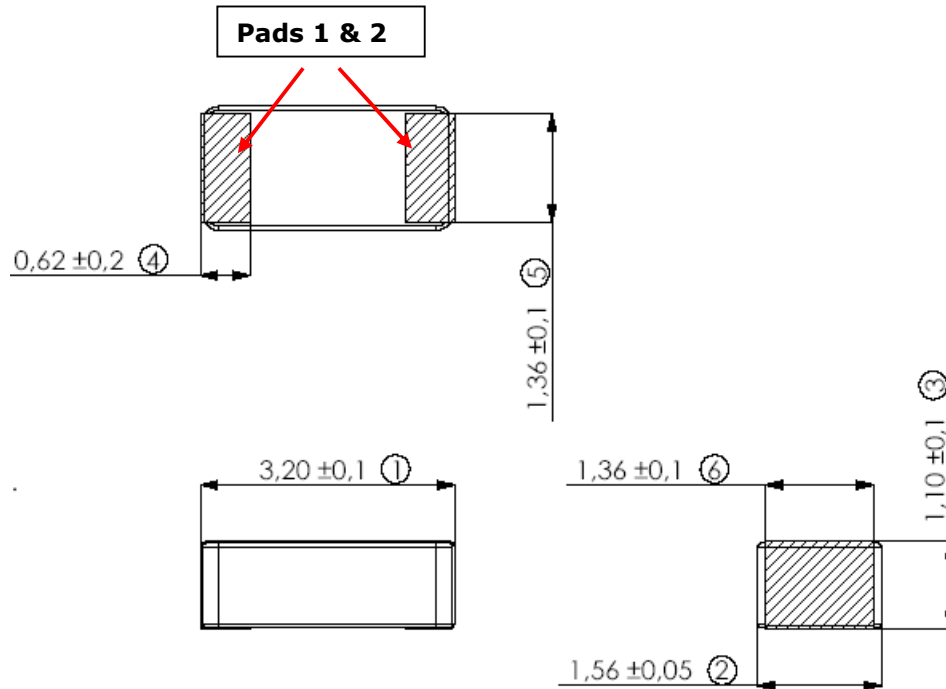
Copper extension on board can be used for frequency fine tuning

PWB features

No.	Terminal Name	Terminal Dimensions
1	Feed	0.80 x 1.60 mm
2	Mech support pad	0.80 x 1.60 mm

Terminal Configuration

Antenna dimensions and contact pads



Antenna features		
No.	Terminal Name	Terminal Dimensions
1	Feed / Support	0.62 x 1.36 mm
2	Feed / Support	0.62 x 1.36 mm
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / Support		

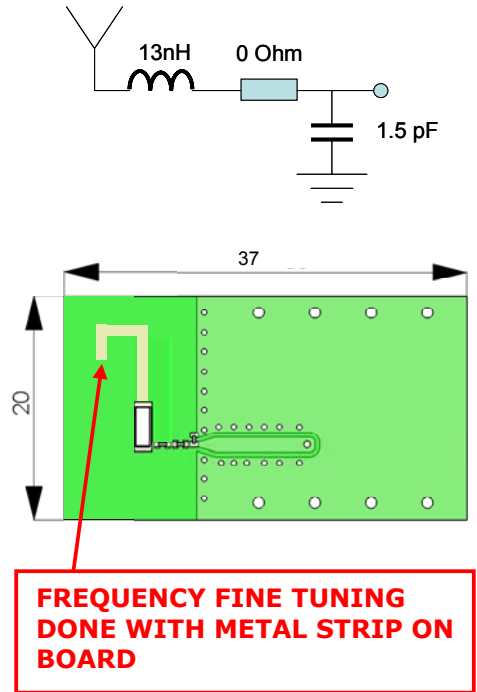
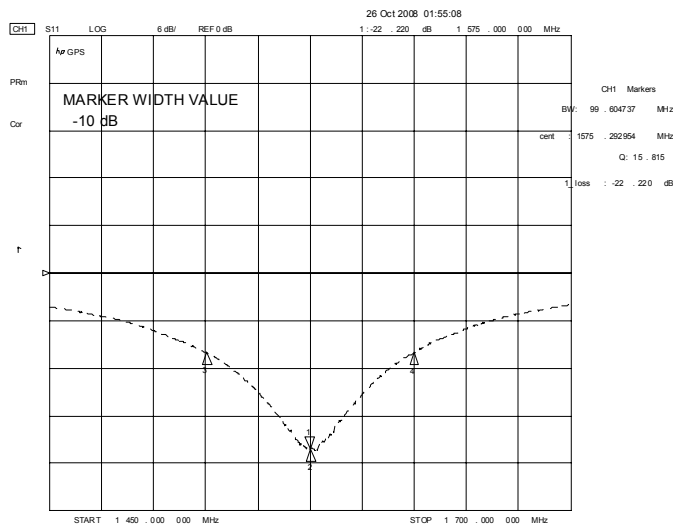
GPS: W3043

Ceramic Monopole Chip Antenna

Typical Electrical Characteristics (T=25 °C)

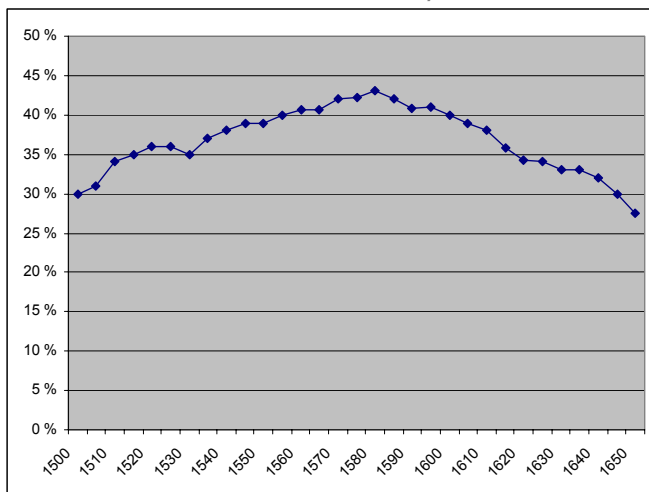
Measured on 37x20mm test board, ground clearance area 12 x 20mm

Typical Return Loss S11

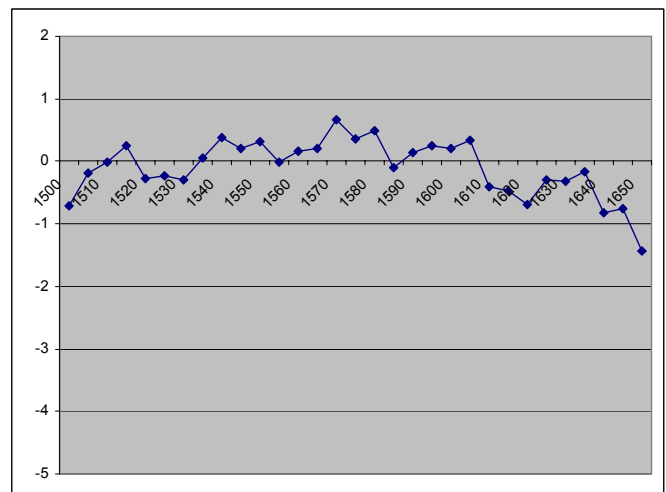


Free space efficiency and maximum gain

3D Total Efficiency



3D Max Gain



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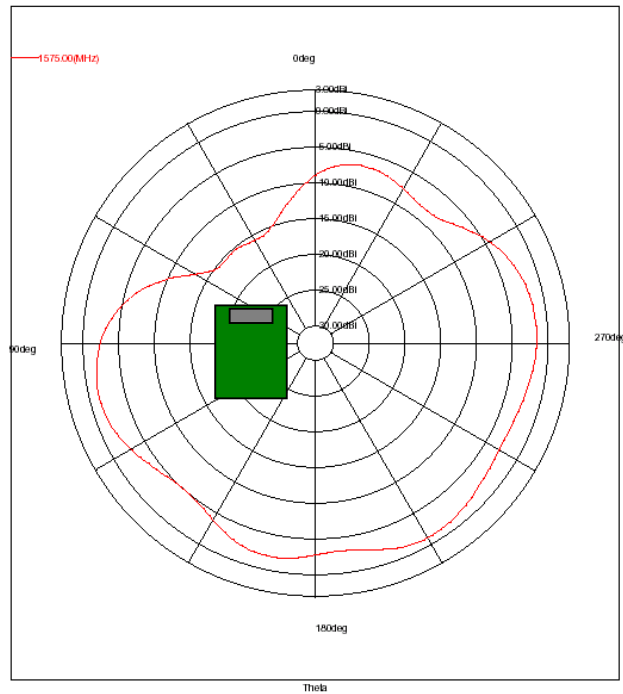
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GPS: W3043

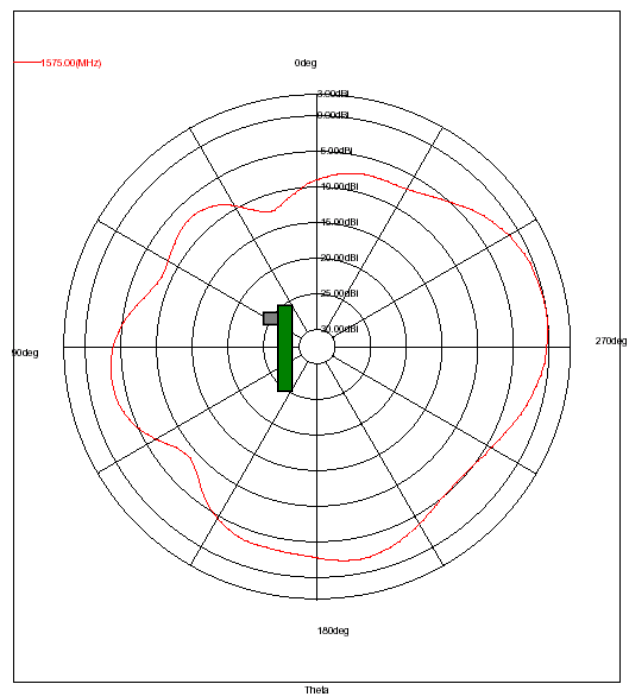
Ceramic Monopole Chip Antenna

Typical Free space Radiation Patterns

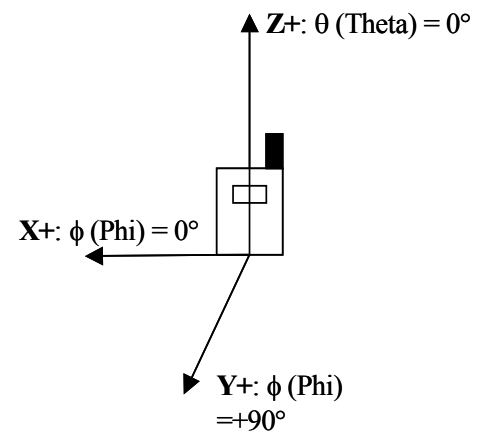
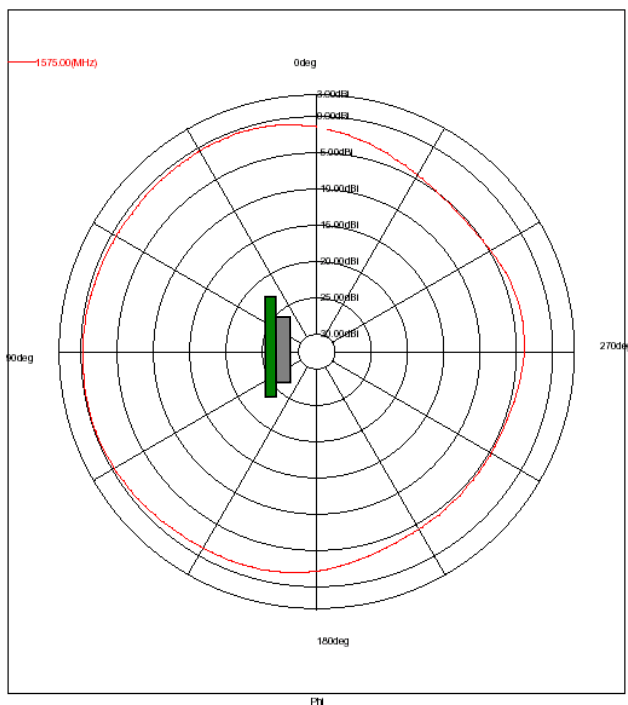
XZ-PLANE



ZY-PLANE



XY-PLANE

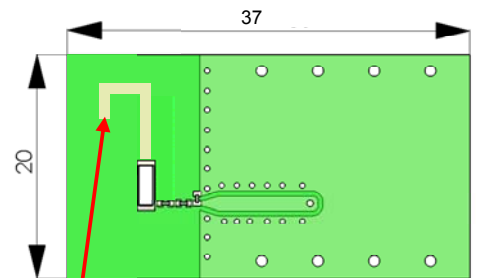
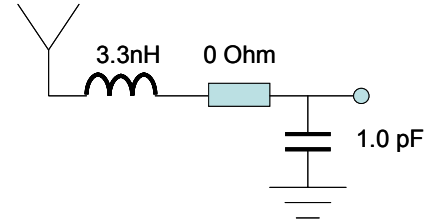
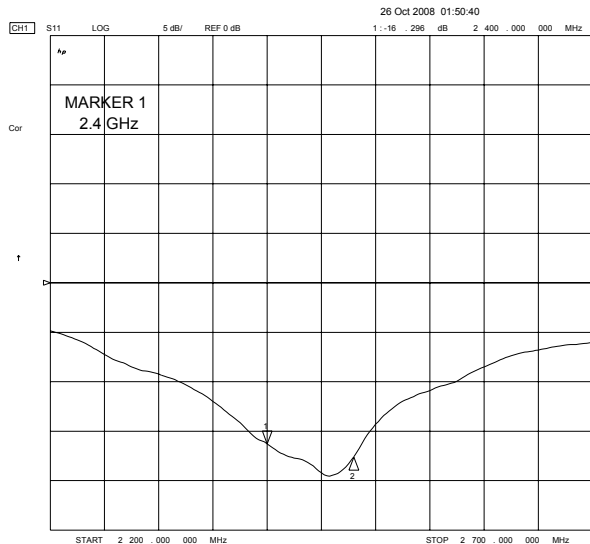


BT, WLAN, WiFi 2.4GHz: W3043

Ceramic Monopole Chip Antenna

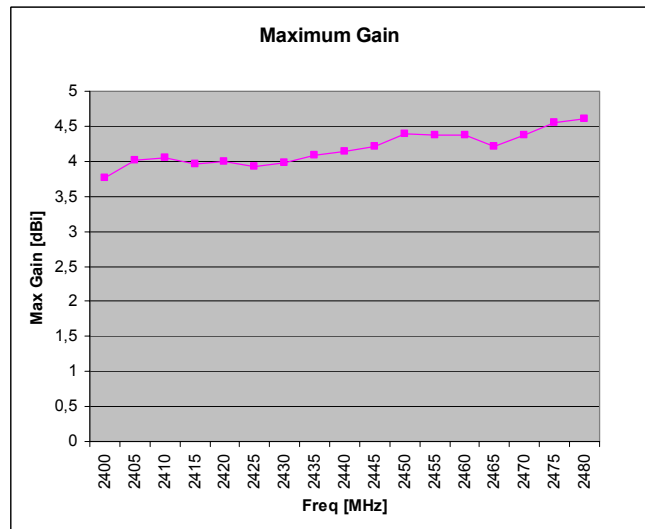
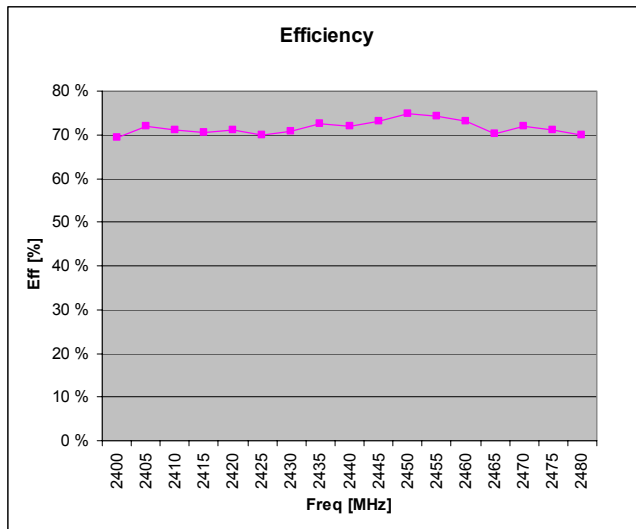
Measured on 37x20mm test board, ground clearance area 12 x 20mm

Typical Return Loss S11



**FREQUENCY FINE TUNING
DONE WITH METAL STRIP ON
BOARD**

Free space efficiency and maximum gain

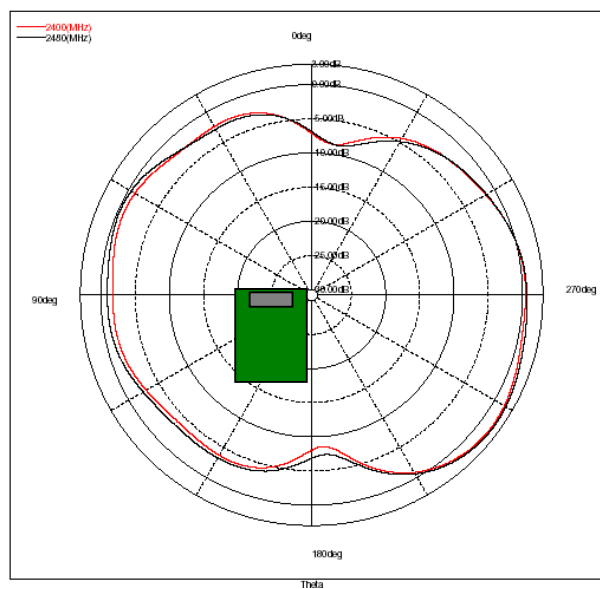


BT, WLAN, WiFi 2.4GHz: W3043

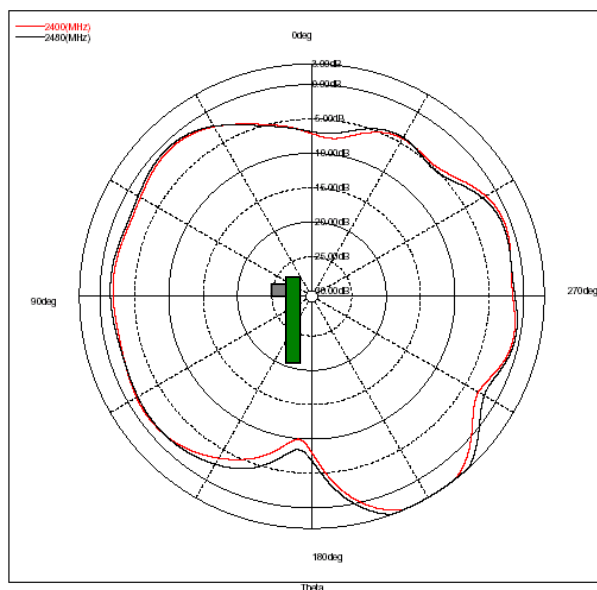
Ceramic Monopole Chip Antenna

Typical Free space Radiation Patterns

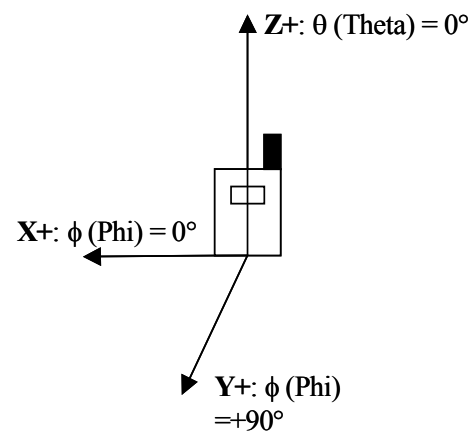
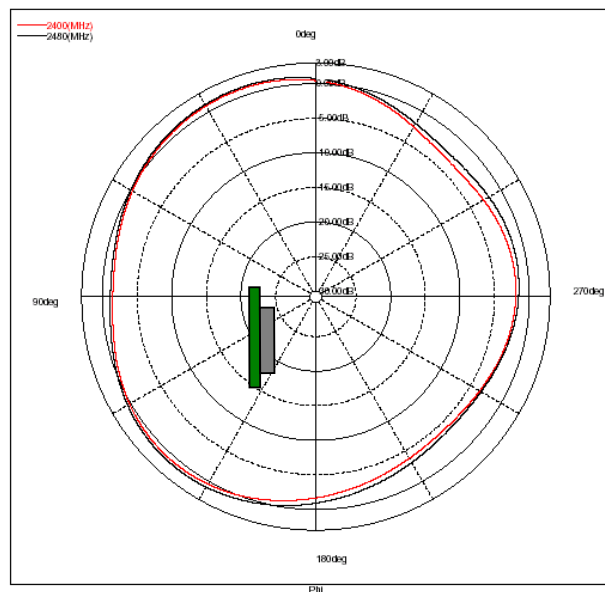
XZ-PLANE



ZY-PLANE



XY-PLANE



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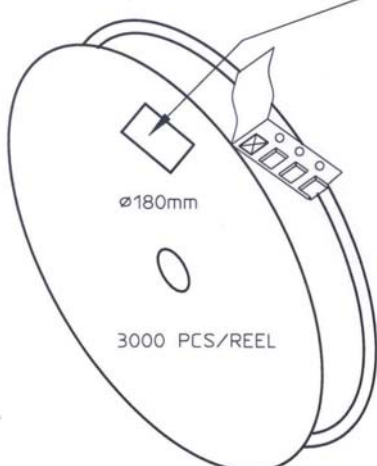
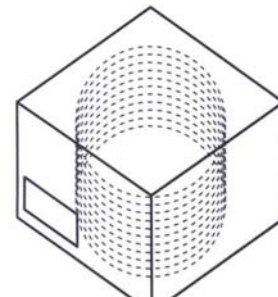
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W3043 packing form

REEL LABEL INFORMATION:

- TRACEABILITY
- QUANTITY
- PRODUCT CODE

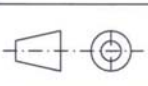
CARRIER TAPE H85-00125
width=8,00 depth=1,22
COVER TAPE H85-00126
width=5,60

LENGTH OF TAPE:

- Leader section: min 350 mm before component section
- Trailer section: min 40 mm 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

MATERIAL					
HANDLINGS					
		RATIO	DRWN	090507 PeHa	H
			DGNER		G
			CHKD		F
			APPRD		E
			APPRD BY		D
PRODUCT H90-OY805					C
					B
					A
DENOMINATION PACKING FORM			VERSION	MOD/DATE/NAME	