

LR250 with Flanged Encapsulated Antenna - Radiation Pattern

Gabriel Serban, June 26, 2013

OUTLINE

- Assembly drawing of LR250 with Standard Horn and Flanged Encapsulated Antenna
- LR250 with 2in Flanged Encapsulated Antenna Radiation Pattern
- LR250 with 3in Flanged Encapsulated Antenna Radiation Pattern
- LR250 with 2in Standard Horn Antenna Radiation Pattern
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- Comparison between 2in Flanged Encapsulated Antenna and 2in Standard Horn Radiation Patterns
- Comparison between 3in Flanged Encapsulated Antenna and 3in Standard Horn Radiation Patterns

Assembly drawing of LR250 with Standard Horn and Flanged Encapsulated Antenna

Assembly drawing of LR250 with
Standard Horn - 7ML5431

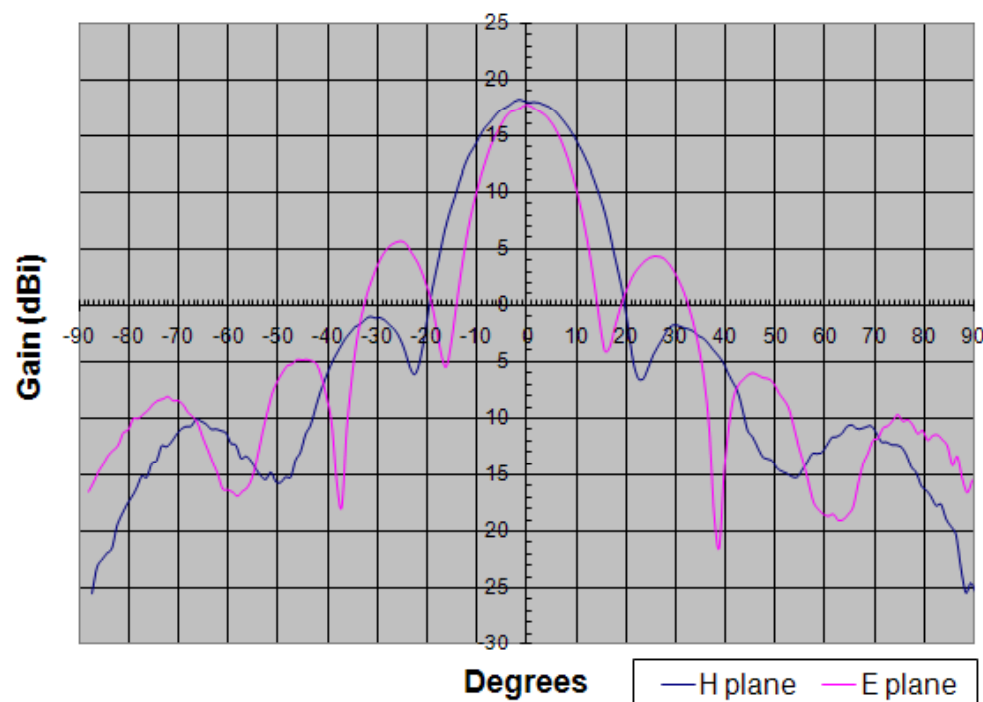
See 7ML5431.pdf

Assembly drawing of LR250 with
Flanged Encapsulated Antenna -
7ML5432

See 7ML5432.pdf

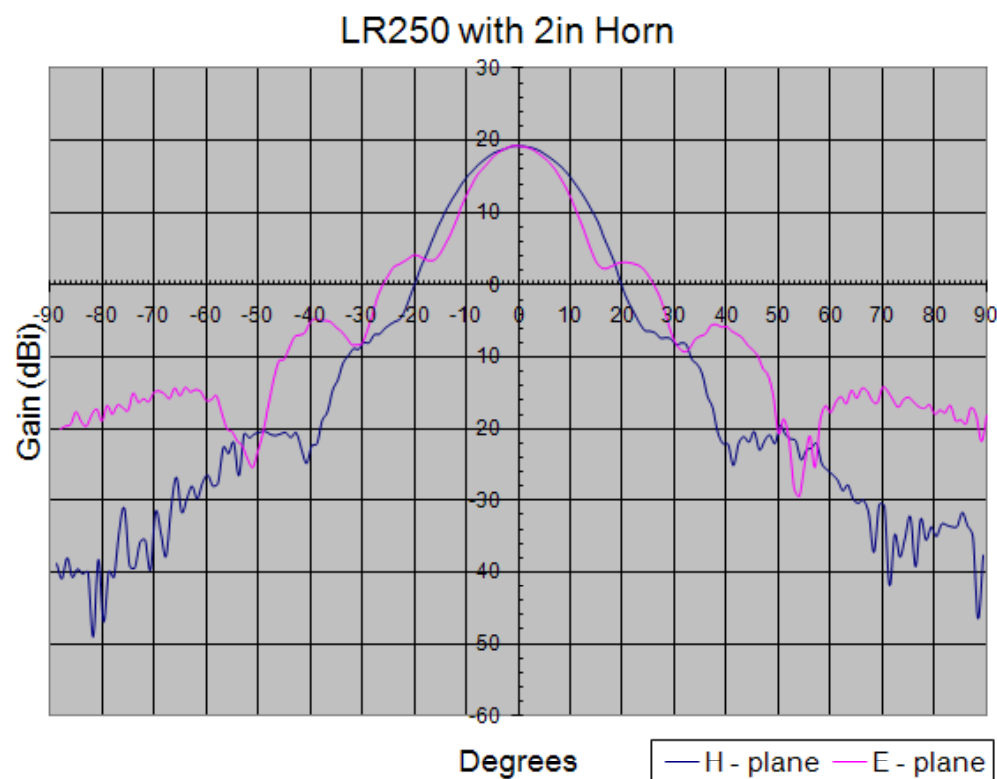
LR250 with 2in Flanged Encapsulated Antenna Radiation Pattern

LR250 2in FEA



LR250 2in FEA	E plane	H plane
Gain	17.9dBi	18.2dBi
Amplitude of first side lobes	5.2dB (12.8dB under main lobe)	-2.0dB (20.0dB under main lobe)
Half beam width at half power (-3dB)	6.4 deg	9.1deg
Half beam width at the first side lobes	25 deg	31 deg

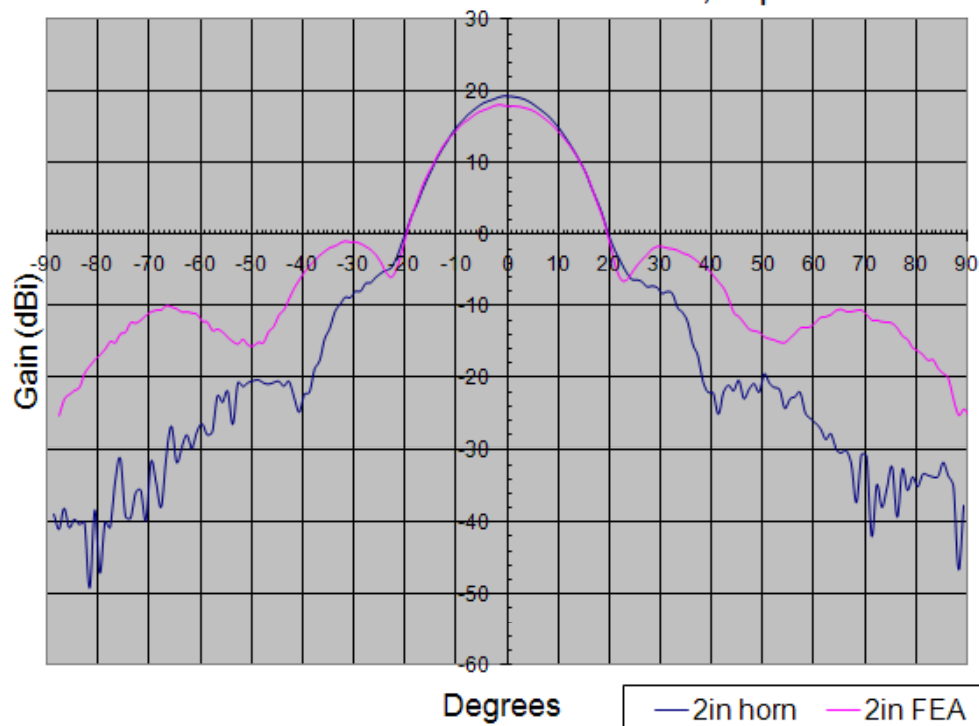
LR250 with 2in Standard Horn Antenna Radiation Pattern



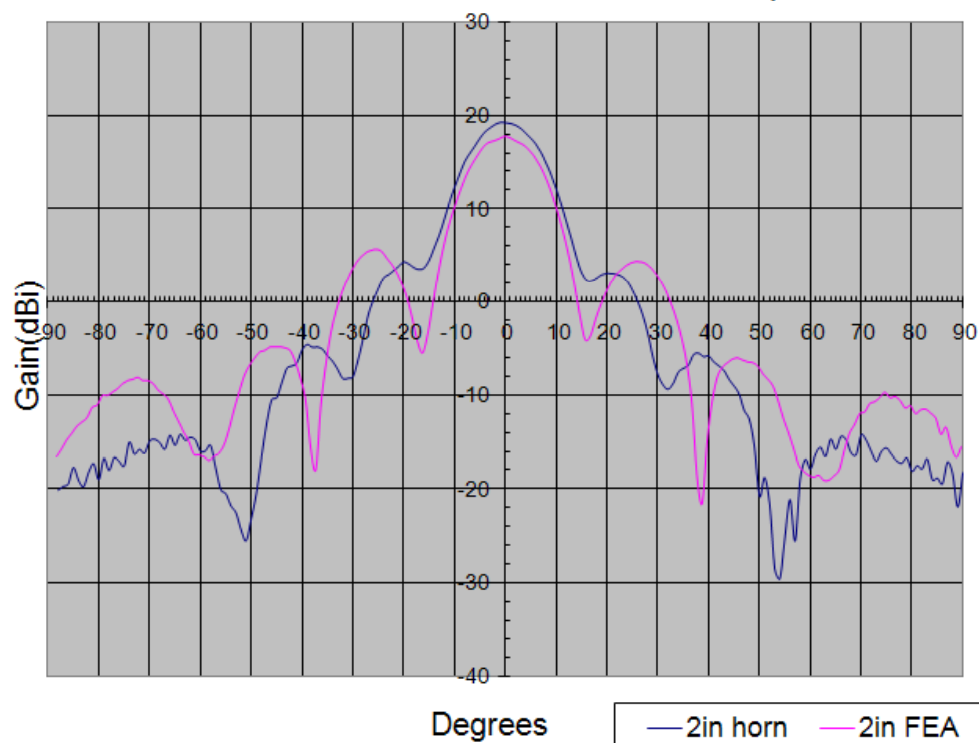
LR250 2in Horn	E plane	H plane
Gain	19.3dBi	19.3dBi
Amplitude of first side lobes	3.4dB (15.9dB under main lobe)	-20.0dB (39.3dB under main lobe)
Half beam width at half power (-3dB)	6.6 deg	8.3deg
Half beam width at the first side lobes	22 deg	45 deg

Comparison between 2in Flanged Encapsulated Antenna and 2in Standard Horn Radiation Patterns

LR250 with 2in HORN and 2in FEA, H plane

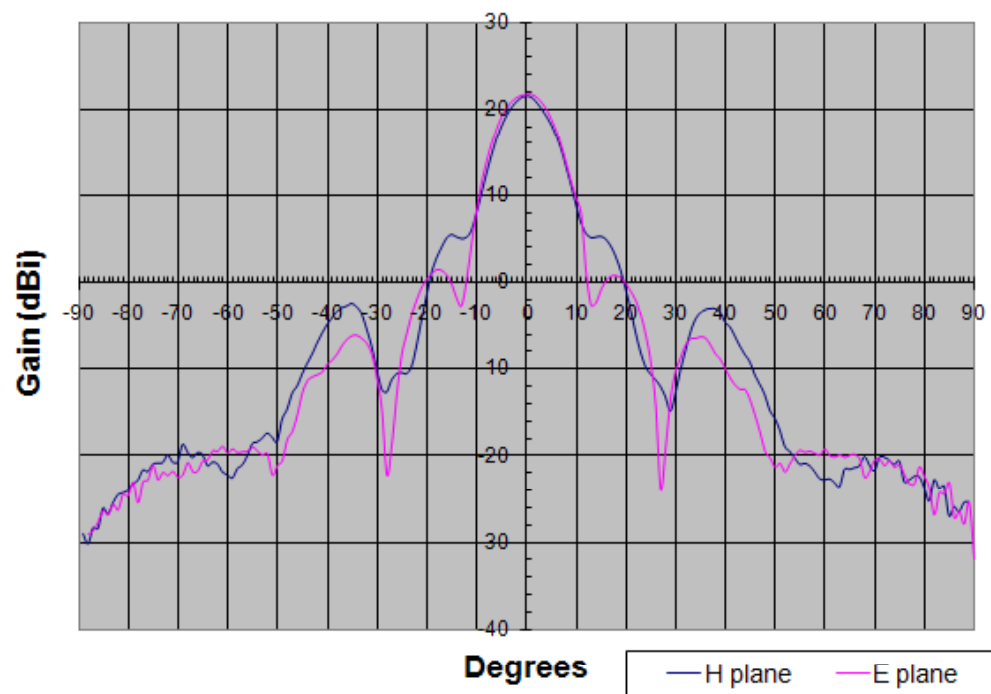


LR250 with 2in HORN and 2in FEA, E plane



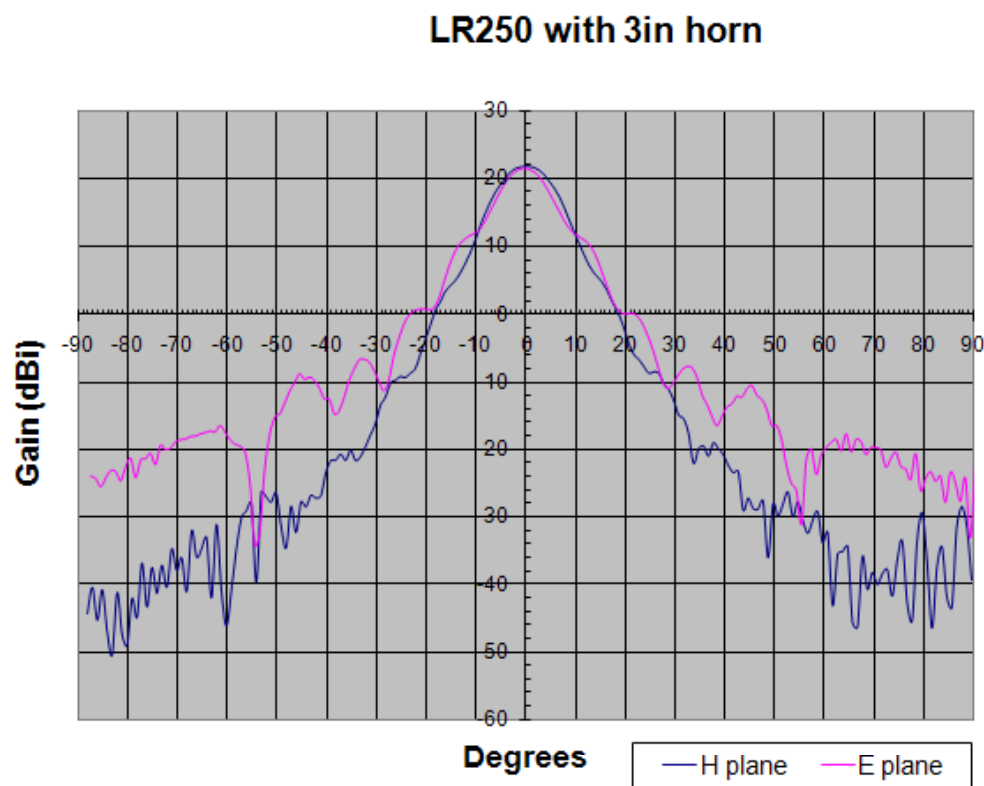
LR250 with 3in Flanged Encapsulated Antenna Radiation Pattern

LR250 3in FEA with 3in flange



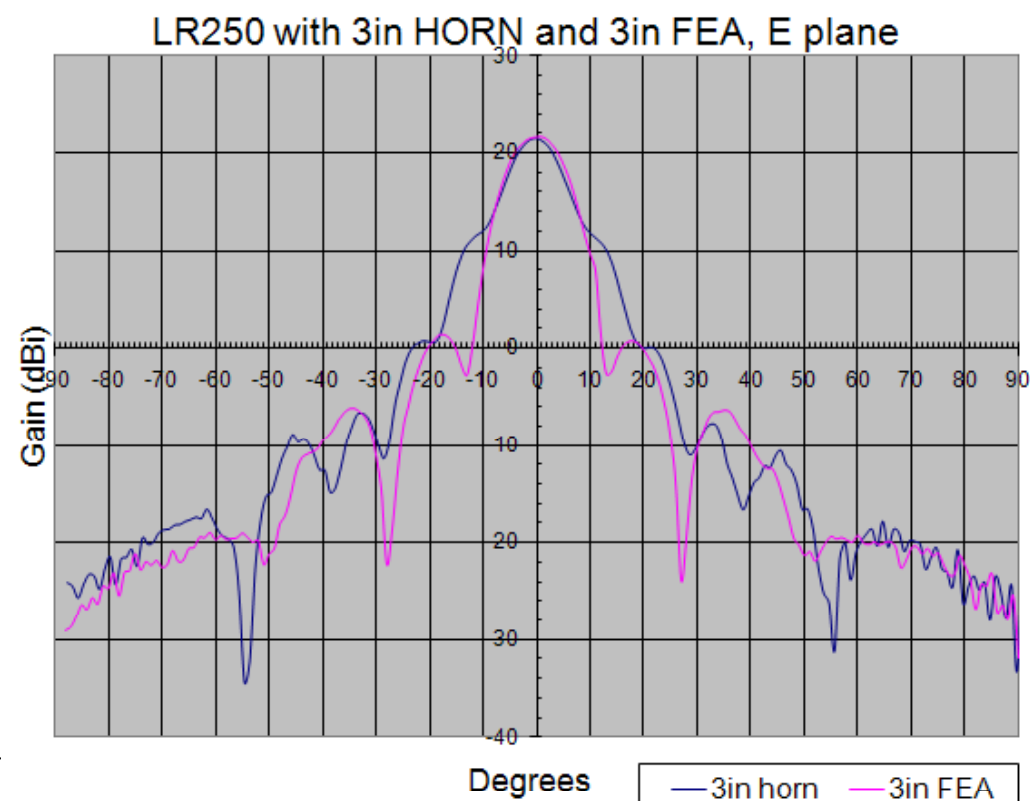
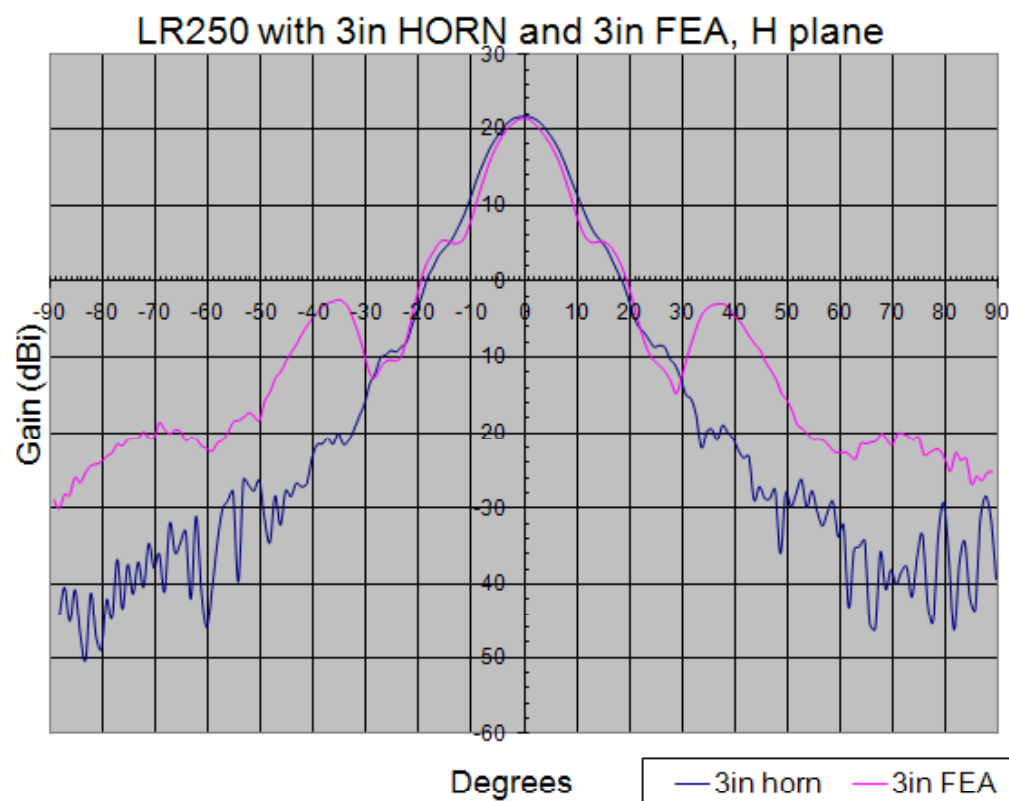
LR250 3in FEA	E plane	H plane
Gain	21.9dBi	21.3dBi
Amplitude of first side lobes	+1.0dB (20.6dB under main lobe)	5.0dB (16.0dB under main lobe)
Half beam width at half power (-3dB)	4.8 deg	4.8deg
Half beam width at the first side lobes	19.1 deg	16.1 deg

LR250 with 3in Standard Horn Antenna Radiation Pattern



LR250 with 3in Horn	E plane	H plane
Gain	20.7dBi	21.9dBi
Amplitude of first side lobes	+1.0dB (20.6dB under main lobe)	-20.0dB (31.9dB under main lobe)
Half beam width at half power (-3dB)	5.5 deg	5.4deg
Half beam width at the first side lobes	20.1 deg	50 deg

Comparison between 3in Flanged Encapsulated Antenna and 3in Standard Horn Radiation Patterns



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