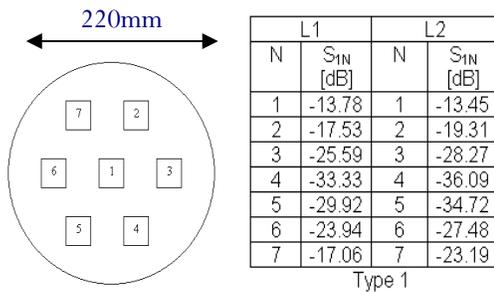


Controlled Radiation Pattern Antenna

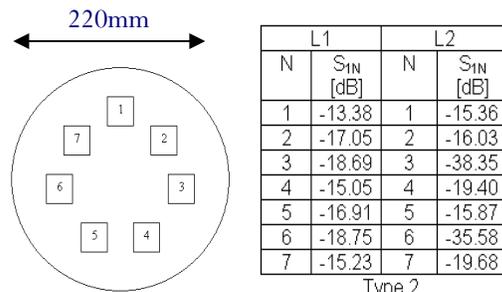
(GPS-CRPA5/14-L1/L1L2-XX)

COVERING L₁ AND L₂ BAND



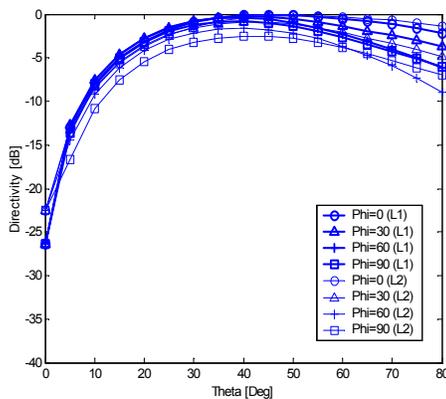
Type 1

Type1: Gain = 8.5dBic (L₁), 5.0dBic (L₂)

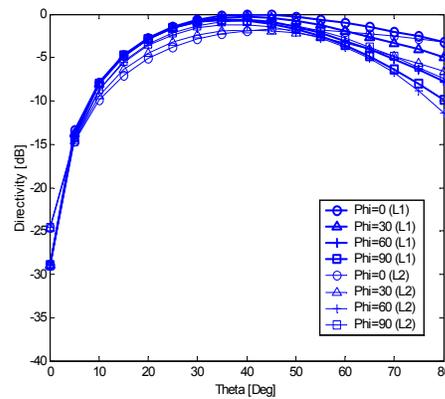


Type 2

Type2: Gain = 8.6dBic (L₁), 5.4dBic (L₂)



Type 1



Type 2

Null Performance

CRPA

CRS has developed Controlled Radiation Pattern Arrays for GPS applications with anti-jamming capability to be installed on vehicles or aircrafts. The key factor in the array performance is the number of antenna elements. CRS CRPAs are 7-element active phase arrays capable of nulling 6 jammers. CRS CRPAs use a full polarization scheme (RHCP - LHCP, Vertical-Horizontal or combination of both) that significantly increases the effectiveness of nulling for a variety of jammers. It is possible by providing all types of polarizations for each element, i.e. linear (V/H), circular (RHCP/LHCP), and elliptical.

Spatial correlation is a negative factor in CRPA, the array elements in a conventional array must be placed far enough (at least half wavelength apart). CRS CRPAs utilize a novel EBG (Electromagnetic Band-Gap) substrates to mitigate the mutual coupling effects between the array elements. This allows the 7-element CRPA of less than 200 mm diameter (conventional CRPA occupies 360 mm diameter). The reduced size CRPA can replace current FPGA in many DoD applications that currently cannot provide A/J capabilities. This antenna is also well suited for commercial applications where digital beam forming is needed.