

Antenna Information

1. Manufacturer's name: Calterah Semiconductor Technology (Shanghai) Co., Ltd.

PRODUCT TECHNICAL SPECIFICATION

Model Name	V1
Frequency Range (MHz)	57000-66000MHz
Peak Gain(dBi)	2dBi

RADIATION CHARACTERISTICS

Table 4.1: AiP Radiation Characteristics

Description	TYP	Unit
TX0 to TX1/2/3 Azimuth Separation	9.8	mm
TX1/2/3 Elevation Separation	2.5	mm
RX Antenna Azimuth Separation	2.5	mm
RX Antenna Elevation Separation	0	mm
RX Antenna Gain	2	dBi
Single TX Mode		
Effective Isotropic Radiated Power (EIRP) at $T_A = 25^\circ\text{C}$	12	dBm
6dB Azimuth Field of View (FoV) ¹	± 40	degree
6dB Elevation FoV	± 30	degree
12dB Azimuth FoV	± 50	degree
12dB Elevation FoV	± 40	degree
TX1-2-3 Combination Mode²		
EIRP at $T_A = 25^\circ\text{C}$	21	dBm
6dB Azimuth FoV	± 40	degree
6dB Elevation FoV	± 20	degree
12dB Azimuth FoV	± 50	degree
12dB Elevation FoV	± 30	degree
Elevation Beamforming Scan Angle	± 30	degree

All performances are tested with an evaluation board of $6\text{ cm} \times 6\text{ cm}$, whose top layer is fully covered with the ground plane. For details about the device layout, see *Rhine AiP/CAL60S244-IB RDP Reference Design*.

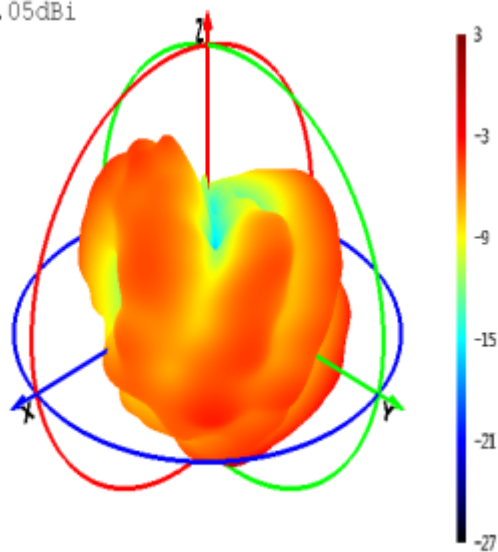
Note: AiP radiation performances are sensitive to the surrounding structure, so the PCB must be carefully designed. For a guide to hardware design, refer to *Rhine CAL60S244-IB Hardware Design Guide*.

¹ Field of View (FoV) is measured with both transmitting and receiving antennas.

² To achieve broadside radiation under TX1-2-3 Combination Mode, the recommended phase setting is as follows: CH1: 0 deg; CH2: 0 deg; and CH3: 0 deg.

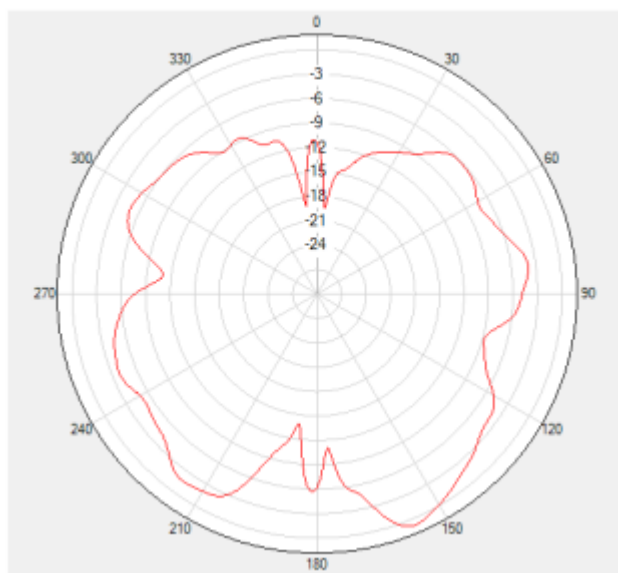
3D_Graphs

MAX:2.00dBi
MIN:-28.05dBi



2D_Graphs

Phi=90



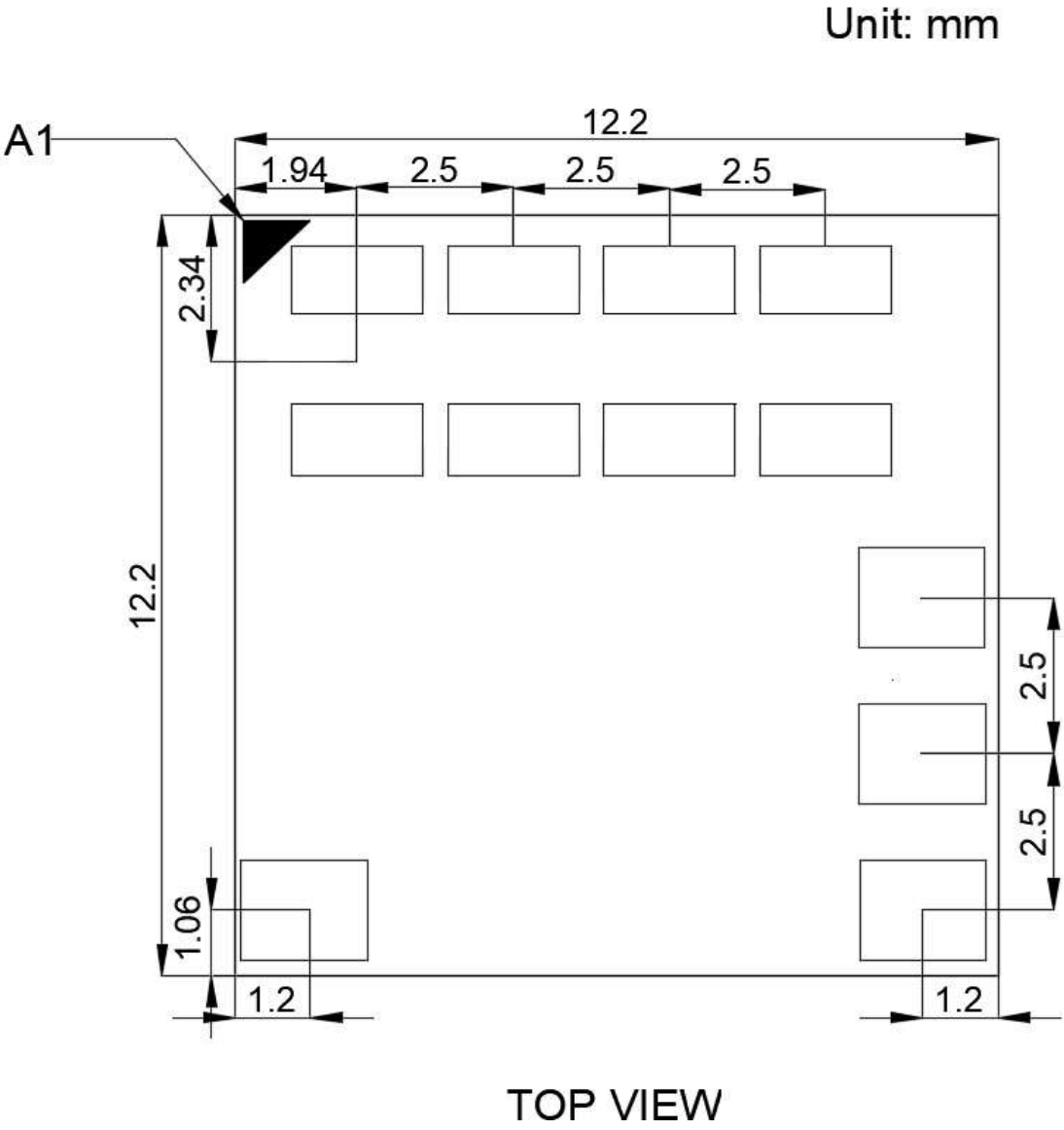


Fig. 7.3: Package Outline Drawing (POD) 3

