

G8C-01-NA2 Antenna and Coil Details

Document Revision History

Revision	Date	Author	Summary
1	Jan 21, 2026	Scott Jacobsen	Initial release for FCC/IC submission package

Product Identifiers

Internal Product Name: G8C

Model: G8C-01-NA2

FCC ID: W77G8C2

IC: 8255A-G8C2

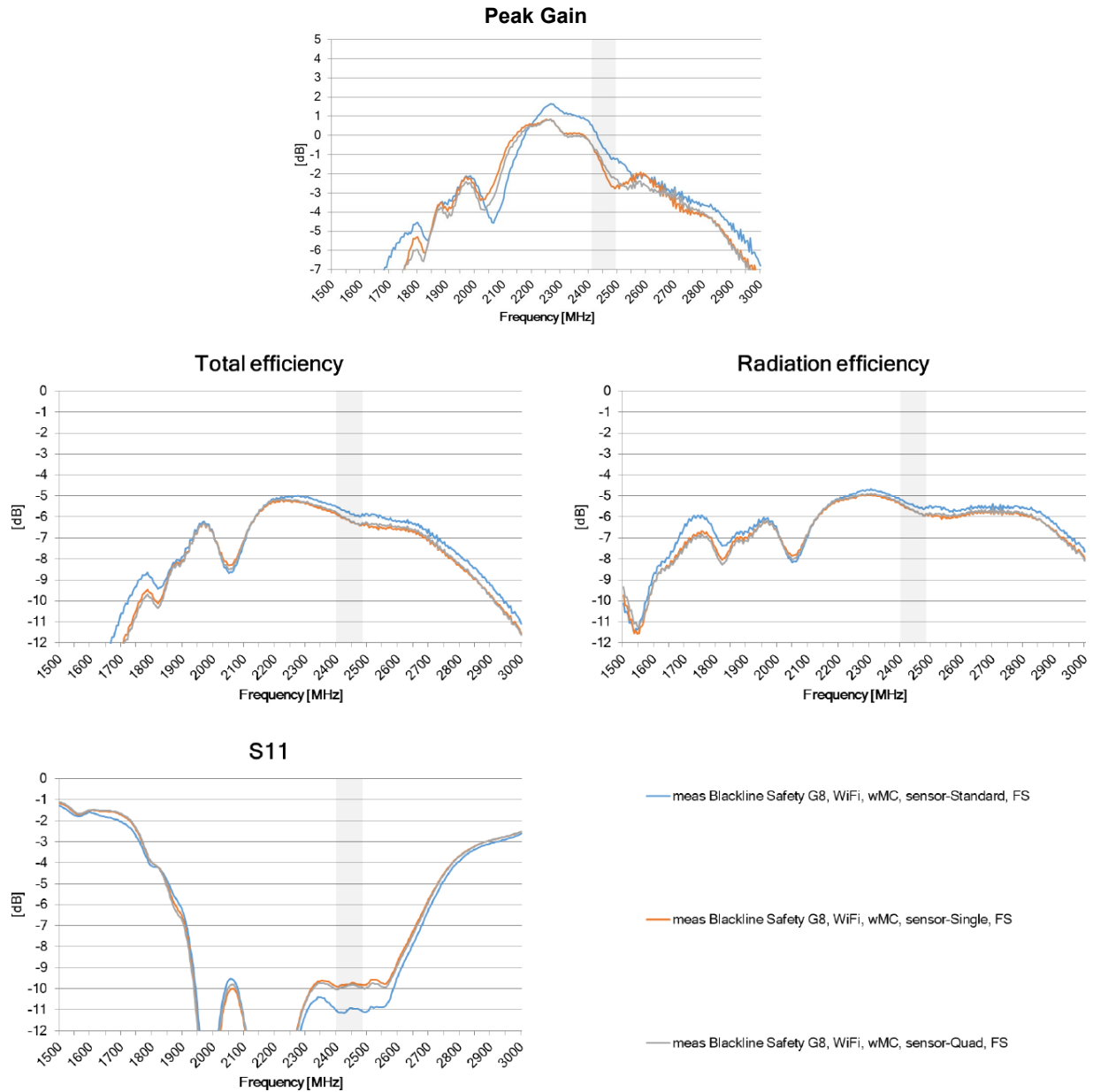
Introduction

This document contains details on the Bluetooth antenna and NFC coil for G8C-01-NA2.

Antenna and Coil Specifications

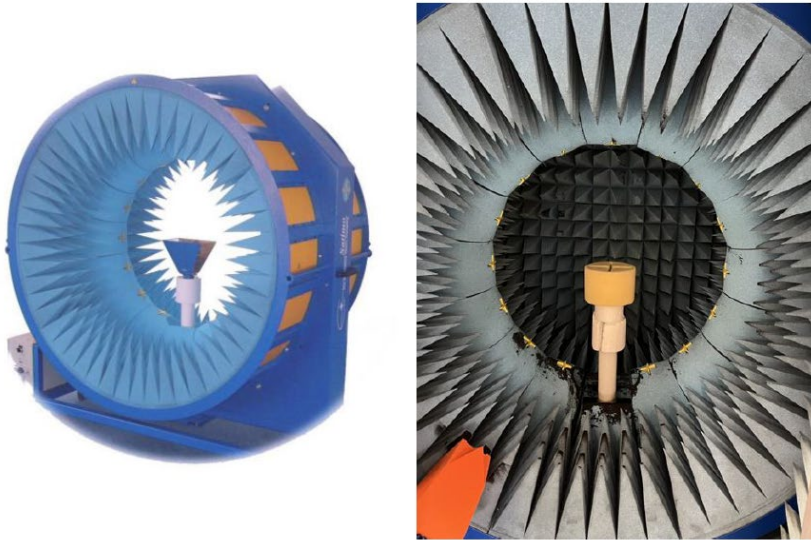
Subject	Specification	Comments
Frequency Range		
Bluetooth	2400-2483.5 MHz	
NFC	13.56 MHz	Center
Peak Gain		
Bluetooth	1.7 dBi	Peak, all frequencies
NFC	N/A	
Dimensions		
Bluetooth	N/A	
NFC		
Number of Windings	4	Nominal
Total Length	39.79 mm	Nominal
Total Width	23.4 mm	Nominal
Trace width	0.5 mm	Nominal
Trace spacing	0.5 mm	Nominal
Inductance	1.366 uH	Nominal

Bluetooth Antenna - Typical Performance



Bluetooth Antenna - Testing Tools

- Satimo (MVG) Starlab (600MHz-6GHz)



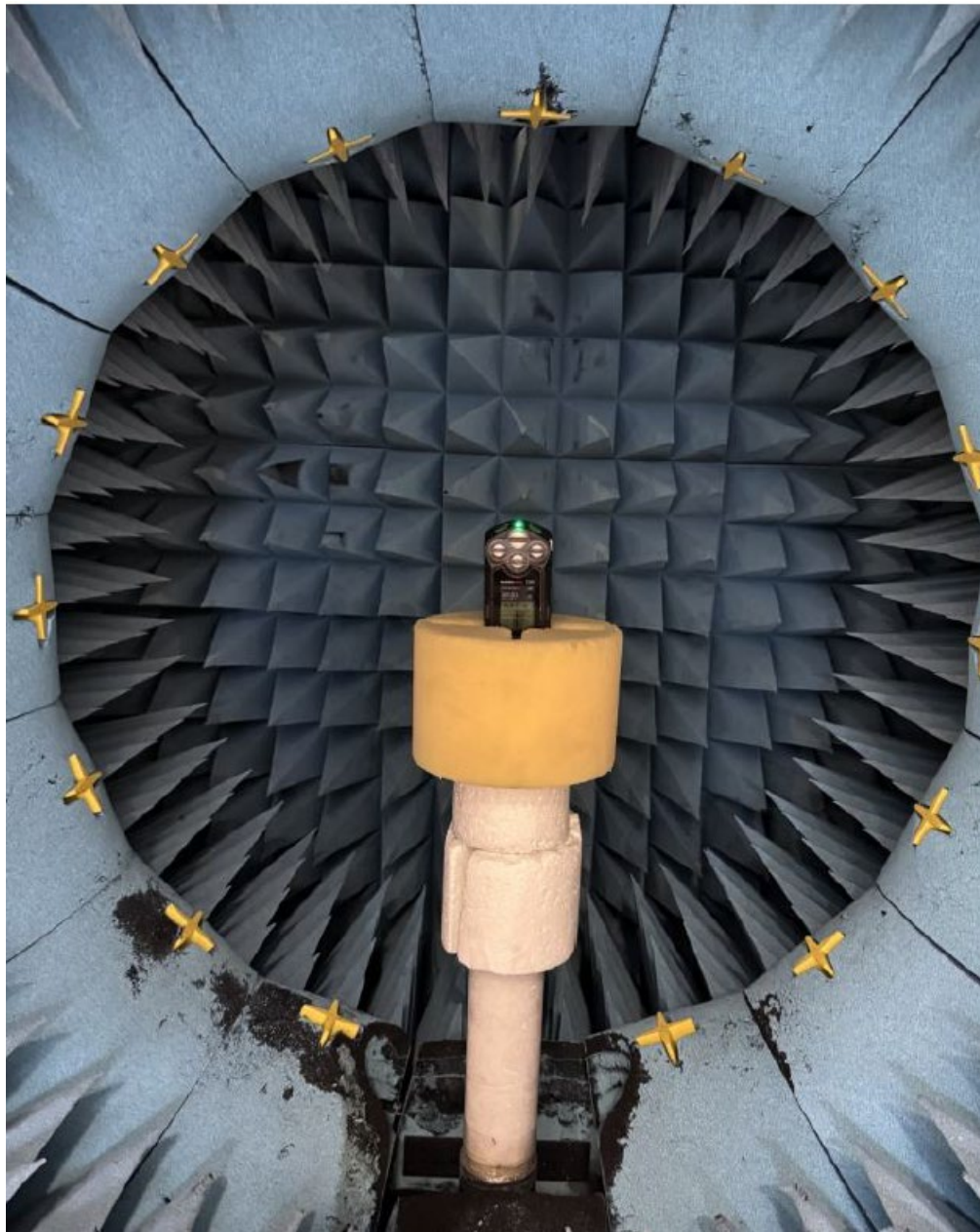
- Calibrated 05/21/2025 by MVG

- Copper Mountain M5090 2-Port 8.5 GHz Vector Network Analyzer



- Calibrated 04/22/2025 By Copper Mountain

Bluetooth Antenna - Test Environment



Antenna and Coil Locations



NOTES

1. THIS DOCUMENT IS FOR CRITICAL DIMENSIONS, NOTES AND TOLERANCES. FOR ANY OTHER DIMENSIONS, REFER TO 3D CAD MODEL AND USE DRAWING'S GENERAL TOLERANCES FOR PART DETAILS.
2. **LDS PLATING:** CU: 12-16µm, NI: 2-4µm, AU: 0.05µm MIN
3. **PLATING FINISH:** SURFACE QUALITY ACCORDING TO CLC CLASS III.
MAXIMUM OVER PLATING 0.03mm.
DIMENSION AND TOLERANCE WAS CONSIDERED 0.03 OVER PLATING.
4. PART COSMETICS TO COMPLY WITH INSPECTION CRITERIA FOR COMPONENTS, SECONDARY OPERATIONS AND FINISHED PRODUCTS: BLACKLINE SAFETY PROCEDURE - COSMETIC ACCEPTANCE CRITERIA DOCUMENT (QC-09PR)
5. (X.XX) = DENOTES INSPECTION DIMENSIONS
6. TOOLING DFM MUST BE COMPLETED AND APPROVED BY BLACKLINE SAFETY PRIOR TO TOOLING MANUFACTURING.
7. THE PATTERN LINE CONNECT AREA STEP ACCORDING TO QA STANDARD
8. EXPLAIN FOR LASER MARKING: ACCORDINGLY TO LASER DRAWING
9. PARTS TO BE PACKAGED TO PREVENT DAMAGE DURING SHIPPING AND HANDLING. EACH PACKAGE WILL INCLUDE THE FOLLOWING INFORMATION:

a. VENDOR NAME

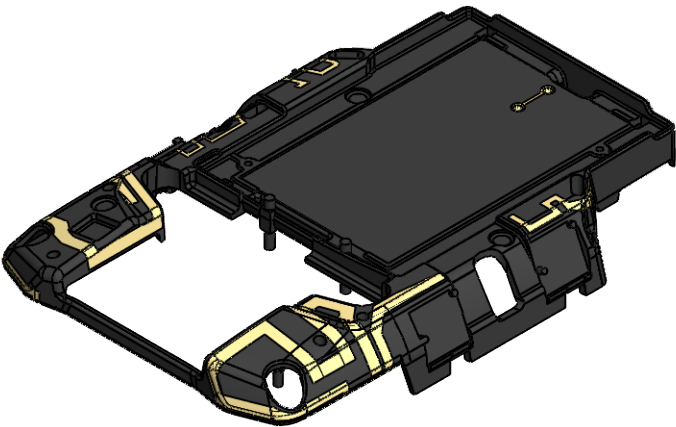
b. MATERIAL

c. PURCHASE ORDER NUMBER

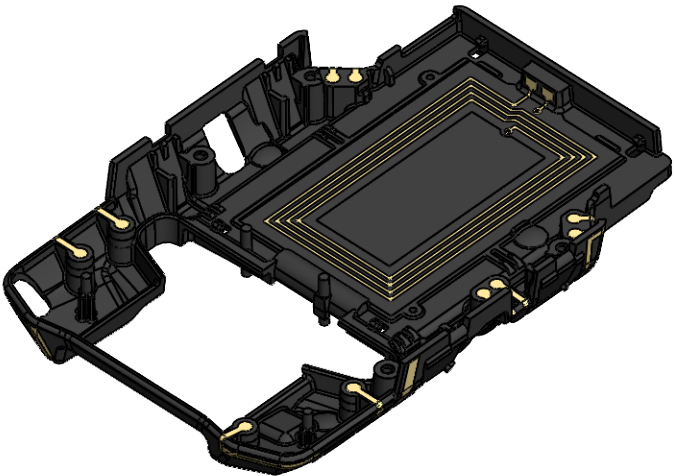
d. QUANTITY

e. PART NO. AND REVISION

f. PRODUCTION DATE



ISOMETRIC VIEW
TOP SIDE ORIENTATION

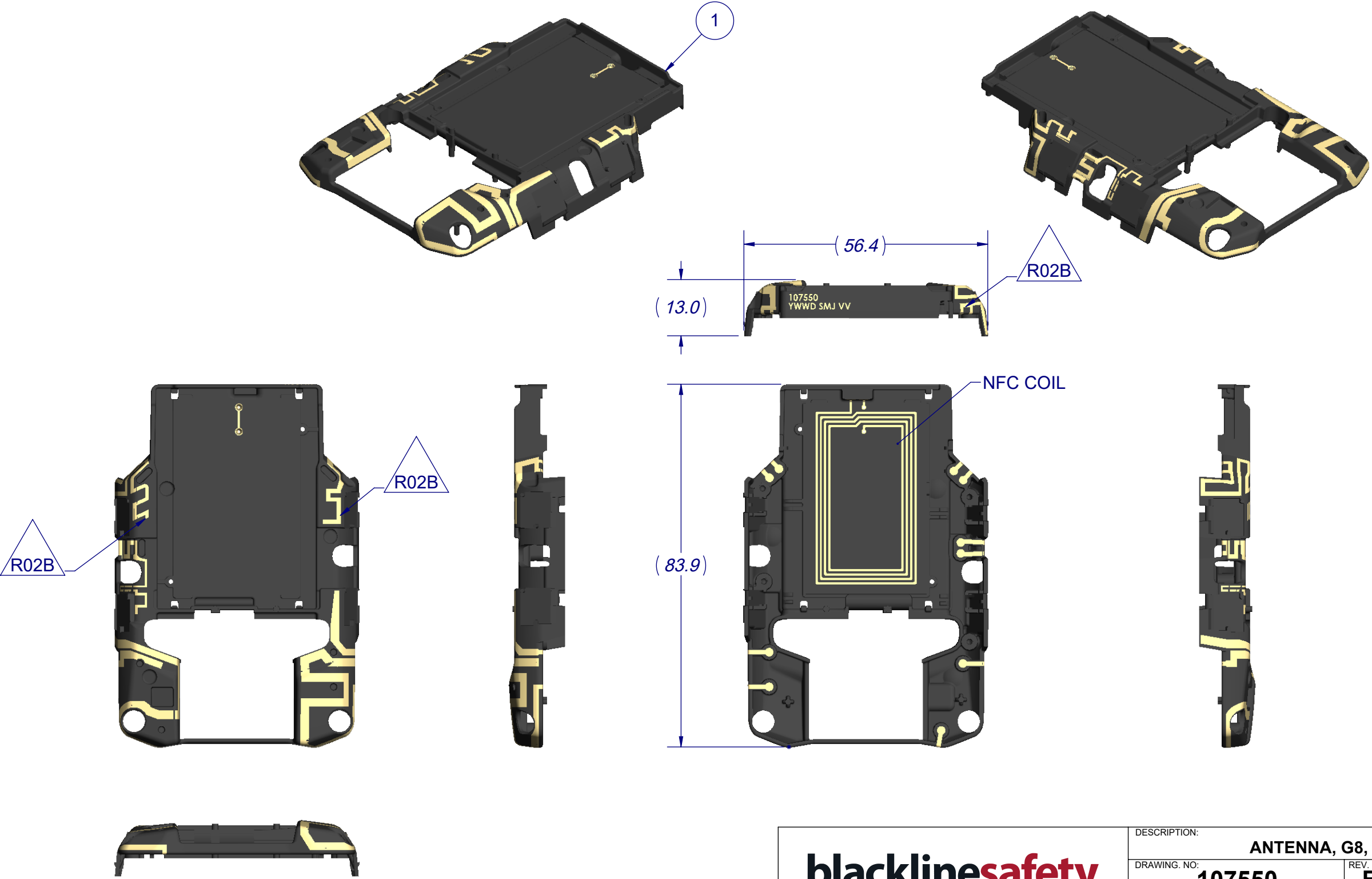


ISOMETRIC VIEW
BOTTOM SIDE ORIENTATION

REVISIONS				
PRT. REV.	DRW. REV.	DESCRIPTION	DATE MM-DD-YY	BY
R01	A	RELEASE FOR PRODUCTION	12-12-24	MC
R02	B	TRACES UPDATED	05-27-25	MC

blacklinesafety	DESCRIPTION: ANTENNA, G8, LDS TRACES GLOBAL				
	DRAWING NO: 107550	REV. PART: R02	REV. DWG: B	DO NOT SCALE DRAWING	SCALE: 1:1
	DRAWN BY: MC	DATE: NOVEMBER 29, 2023		3RD ANGLE PROJECTION: 	SIZE: B
	PROPRIETARY AND CONFIDENTIAL. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BLACKLINE SAFETY. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BLACKLINE SAFETY IS PROHIBITED.			DIMENSIONS: MM	PAGE 1/2
Blackline Safety Canada www.blacklinesafety.com					

ITEM NO.	CLIENT PARTNO	DESCRIPTION	MATERIAL	QTY.
1	107549	PLASTIC, G8, LDS SUPPORT	PC -SABIC DX11355	1



blacklinesafety	DESCRIPTION: ANTENNA, G8, LDS TRACES GLOBAL				
	DRAWING NO: 107550	REV. PART: R02	REV. DWG: B	DO NOT SCALE DRAWING	SCALE: 1:1
DRAWN BY: MAXIME CAVANAGH POULIOT		DATE: NOVEMBER 29, 2023		3RD ANGLE PROJECTION:	SIZE: B
Blackline Safety Canada www.blacklinesafety.com		PROPRIETARY AND CONFIDENTIAL. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF BLACKLINE SAFETY. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF BLACKLINE SAFETY IS PROHIBITED.		 DIMENSIONS: MM	PAGE 2/2