



Shielding Attenuation Test Report

For

EMI Shielding Gasket

Test Report No.: CCTL/EMC/TRP/CML/2526/ESG001



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For any Complaints / Suggestions, please email to

emc@cosmictestlab.com

Submitted by

Cosmic Compliance Test Lab

NABL accredited lab

A-1, Sy No 192/1, III Phase Bommasandra,

Bengaluru - 560099.

Amendment History:

Revision No.	Date of Amend.	Amendment made	Reasons	Approved by
-NA-	-NA-	-NA-	-NA-	-NA-

Laboratory Accreditation Details:

The accreditation details in the below table.

Accreditation Bodies	Certificate Number
National Accreditation Board for Testing and Calibration Laboratories (NABL) as per ISO/IEC 17025:2017 Agreement for use of NABL Accredited CAB combined ILAC MRA Mark	TC-12001

General acronyms for the report

dB	Decibel
dBm	Absolute Decibel mill-watt
EMC	Electromagnetic compatibility
GHz	Gigahertz
kHz	Kilohertz
MHz	Megahertz
dB	Decibel
dBm	Absolute Decibel mill-watt
EMC	Electromagnetic compatibility
GHz	Gigahertz
kHz	Kilohertz
MHz	Megahertz
mm	Millimeter
RF	Radio Frequency
SE	Shielding Effectiveness
Sig.Gen.	Signal Generator

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1. General Information

Name of the Applicant	Precollee
Contact Name	Hariharan
Contact No	9677422109
Email id	ragothaman@precollee.com
EUT Manufacturer Name and Address	Precollee 245/3A Vadamalai Gounder Nagar, Thirunagar Road, Vanur,Puthurai, Villupuram, Tamilnadu 605111
EUT Name	EMI Shielding Gaskets
Model No	EMG
Serial No	001
Name of the Laboratory	Cosmic Compliance Test Lab. Pvt. Ltd.
Laboratory Address	SyNo.192/1, A-1, Munireddy Industrial Estate, 3rd Phase, Bommasandra, Bangalore - 560099
Tests Conducted	EMI shielding of Gasket test.
Test Standard	Refer Test Summary
Status of EUT on receipt	The sample was received in Good Condition.
EUT Received on	17-03-2026
Dates of Test	19-03-2026
Test Report Issued on	27-03-2026
Test witnessed by	NA
Test Result	Refer test summary.
Statement of conformity	NA
Report prepared by	Lakshmi Devi P

Test Engineer and Reviewer Details

<p>Tested by</p>  <p>Mr. Naresh Thippineni Test Engineer</p>	<p>Reviewed by</p>  <p>Mr. Anil R Lab in Charge</p>	<p>Authorized by</p>  <p>Mrs. Senthamarai R Technical Director</p>
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2. Test result summary:

Annexure	Test carried out	Test date	Result / Observation	Remarks
EMI shielding of the gasket.				
Annexure A	Attenuation	19-03-2026	-	-

Conclusion: All indications of PASS/FAIL in this report are opinion expressed by test laboratory based on interpretations and/or observations of test results. Please refer individual annexures for detailed test results/observations.

Remarks: Additional remarks if any

2.1 Test performed in subcontract lab:

Annexure	Test carried out	Test date	Result/ Observation	Remarks
N/A	N/A	N/A	N/A	N/A

2.2 Measurement uncertainty

The following measurement uncertainties are applicable to the relevant tests that are mentioned below:

Test	Uncertainty (\pm)	
Attenuation	30MHz-18GHz	± 2.22 dB

2.3 Opinions & interpretation

None

2.4 Deviation from Standard

None

3. Equipment under Test Information

Equipment Name:	EMI Gasket
Model No.:	EMG
Brand Name:	NA
Type of Equipment	

3.1 Description of EUT



Figure 1: Equipment Under test Photo



Figure 2: Marking Label of EUT



Figure 3: Measurement fixing

4. Test requirements

Annexure A: EMI shielding of Gasket tests

Common information:

Test Date : 19-03-2026
 Temperature : 26 ° C
 Humidity : 57.5% RH

Test Specification:

Test Standard : IEEE 299-2006, IEEE 299-1:2013
 Frequency : 50MHz 18GHz

Test Equipment Used:

Sl.No	Name of Instrument	Make/Model no	Quantity
1.	Spectrum Analyser & EMI Receiver	R&S/ESW44	1
2.	Signal Generator (9kHz – 40 GHz)	R&S / SMB 100A	1
3.	Pre Amplifier	Sonoma Instrument Co/ 315	1
4.	Biconical Antenna (Tx)	Compower/AB-900A	1
5.	Biconical Antenna (Rx)	Compower/AB-900A	1
7.	Double Rigid Guide horn Antenna (Tx/RX)	Compower/AH-118	2
8.	Double Rigid Guide horn Antenna (Rx)	Amplifier research/ ATH800M6G	1
9.	Double Rigid Guide horn Antenna (Rx)	Amplifier research/ ATH6G18A	1
10.	High frequency cable with low loss (Tx)	Srinar Communication	1
11.	High frequency cable with low loss (Rx)	Srinar Communication	1

REMARK:

Note:

- (1) "N/A" denotes no model name, no serial no. or no calibration specified.
 (2) The calibration period of the equipment list is one year.

Shield Performance Criteria

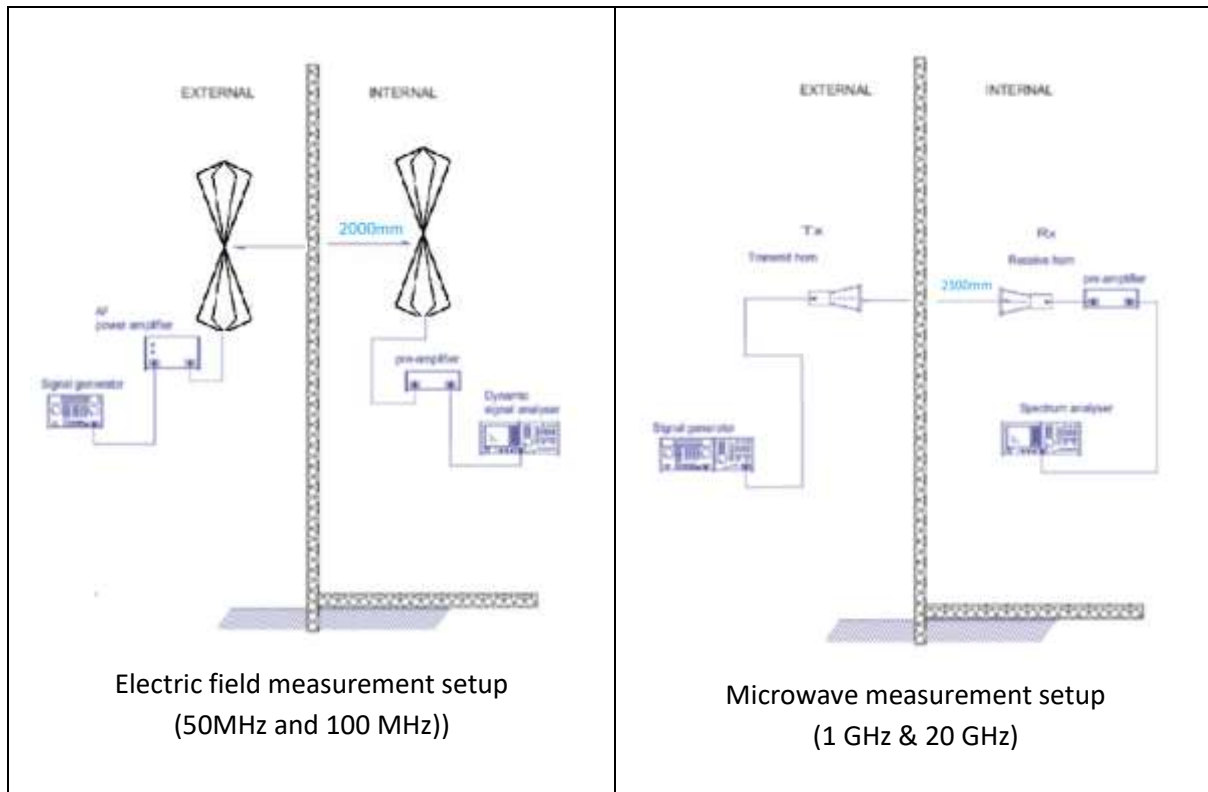
The performance criteria of the RF shield enclosure is to provide an interference free environment and eliminate RFI signals within the shielded environment when tested in accordance with IEEE 299-2006. It is noted, that due to the design characteristics of the shielding media, a single point ground was not attained or attempted.

Shielding effectiveness (or attenuation) is defined as the level of electromagnetic reduction provided by a shield.

Test Methodology and Specification

Before starting the measurement, the visual inspection of the sample was conducted to ensure the sample in good condition

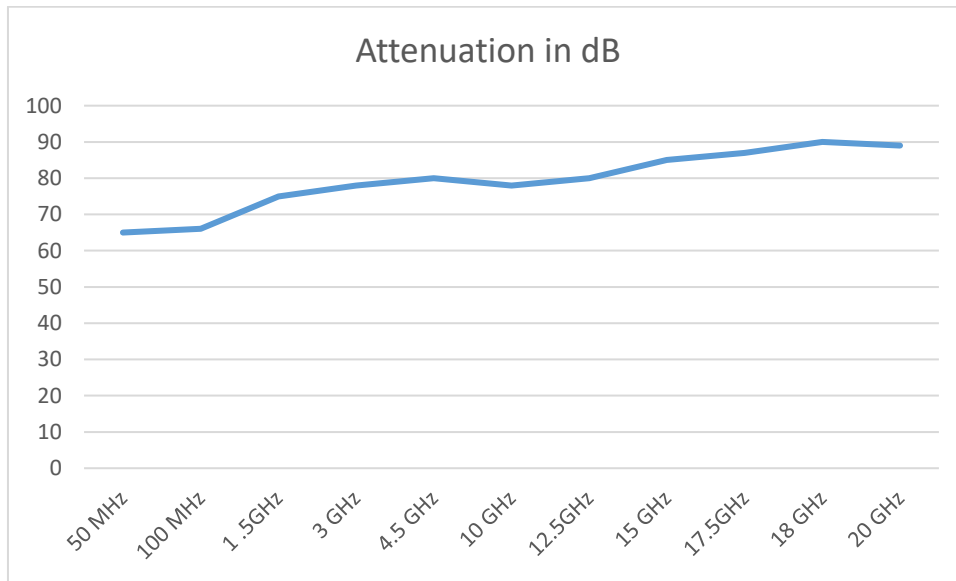
- i. Reference level measured using the matched pair of co polarized antennas at outside of the chamber with non-metal area.
- ii. Using a spectrum analyser as a receiver and signal generator as a transmitter, a satisfactory balance of transmitter power and receiver sensitivity (Dynamic range) established.
- iii. To determine the exact shielding effectiveness of the sample, calibration was performed at 1 metre away from any screened walls, at all the agreed test frequencies, through free space, to establish the Reference levels. These levels were obtained by setting up the equipment in the same configuration as the actual shield measurements. As the equipment set up remained constant throughout the shield testing, the reference signal level was well above the shielding effectiveness requirement levels.
- iv. Ensured reference signal level was well above the shielding effectiveness requirement.
- v. Figures 1 indicates the typical arrangements of equipment for electric field, plane wave and microwave measurements. It should be noted that the transmit antenna is placed outside the shielded volume and the receive antenna inside the enclosure. The reference levels are taken using the same setup but without the shield being in between the transmit and receive antenna.
- vi. The S.no 5 process was repeated all accepted frequency as noted in the Table 1



Test results

Table 1

Sl no	Frequencies	Antenna	Attenuation in dB
1	50 MHz	Biconical	65
2	100 MHz		66
3	1.5GHz	Horn	75
4	3 GHz		78
5	4.5 GHz		80
6	10 GHz		78
7	12.5GHz		80
8	15 GHz		85
9	17.5GHz		87
10	18 GHz		90
11	20 GHz		89



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End of Test Report

