



APPLICATION NOTE

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**APPLICATION NOTE
GHSM S-PARAMETER MODELS**

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REVISION HISTORY

REV	DATE	REVISED PAGES	AUTHOR	REVISIONS
A	11/29/2023		L. Blackwell	Initial Release
B	7/26/2024		L. Blackwell	Updated touchtone links of table 2
C	7/24/2025		L. Blackwell	Added Sav-con, Feedthru, and wired connector

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1.0 Purpose

This document describes the GHSM, board connector to board connector, electrical behavioral models.

2.0 Referenced Documents

Document Number/Name	Description
GT-22-246	GHSM High Speed Test Report
GHSM-BSS	GHSM Board Straight Connector Drawing
GHSM-HBR	GHSM Hybrid Board Right Angle Connector Drawing
GHS7M-1011-1-6	Cable Assembly Mated Drawing
GHS7M-1091	GHSM2R-15 Jumper Assembly Drawing
GHSM-USP1	GHSM Sav-Con Drawing
GHSM-1011	GHSM Feedthru Drawing

Table 1. Reference Documents

3.0 Responsibility

This document is the responsibility of the Glenair High-Speed Datalink Group.

4.0 GHSM S-Parameters

4.1 Configurations

The S-parameter models were obtained through testing PCB mounted GHSM straight (BSS) connectors, GHSM right angle (HBR) connectors, cable assemblies, Sav-Con connectors, and Feedthru connectors. Refer to Glenair Test Report GT-22-246 for detailed testing information. The resulting models consist of S-parameters in Touchstone formatted files. The following table delineates the tested configurations and the resulting Touchstone files.

Configuration	Touchstone File
BSS	GHSM BSS Mated Pair.s4p
HBR PTH	GHSM HBR PTH Mated Pair.s4p
HBR SMT	GHSM HBR SMT Mated Pair.s4p
BSS to HBR	GHSM BSS mated to HBR.s4p
BSS w/ Cable	GHS7M-1011-1-6 ST-ST.s4p
HBR PTH w/ Cable	GHS7M-1011-1-6 RA-RA PTH.s4p
HBR SMT w/ Cable	GHS7M-1011-1-6 RA-RA SMT.s4p
BSS to HBR w/ Cable	GHS7M-1011-1-6 ST-RA.s4p
GHSM2R-15 Cable Assembly Mated Pair	GHSM2R-15.s4p
Sav-Con w/ GHSM2R-15 Cable	GHSM2R-15USP1.s4p
Feedthru w/ GHSM2R-15 Cable	GHSM-1011-2R15SN.s4p

Table 2. Test Configuration to Touchstone File Mapping

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In addition to direct downloadable links from the table, the files of Table 2 are supplied as attachments to this document.

4.2 Port Assignments

The Touchstone files utilize the following port assignments:

