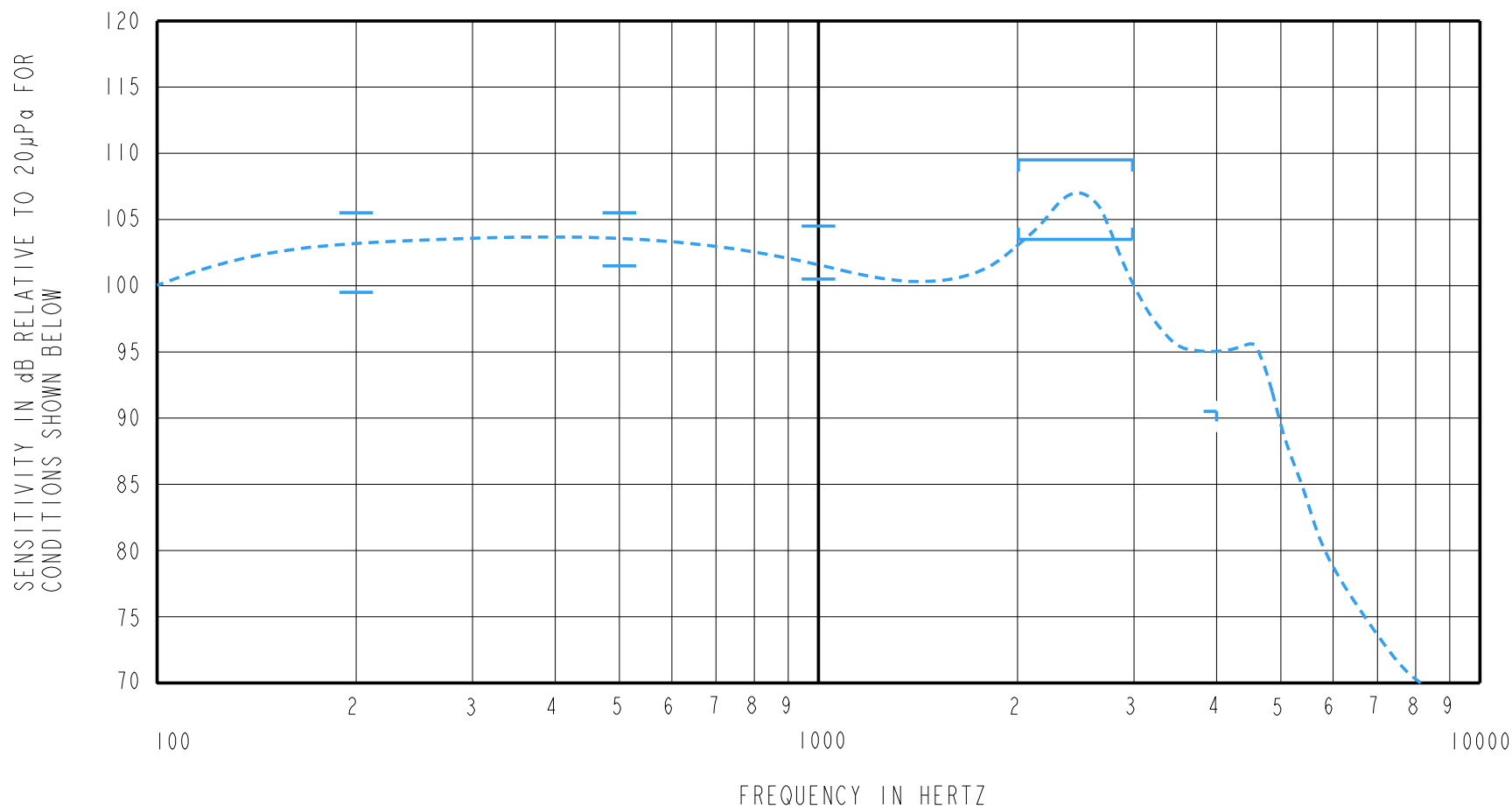


THE FED-27304-104 IS A FERROFLUID AND TYPE III DAMPED ED-27304 RECEIVER WITH A PEAK OF 4dB RELATIVE TO THE SENSITIVITY AT 1kHz UNDER CONSTANT VOLTAGE DRIVE CONDITIONS. THIS MODEL HAS INCREASED DCR/IMPEDANCE RATIO.

FERROFLUID AND
TYPE III DAMPING

FED-27304-104
SHEET 2.1

CONSTANT VOLTAGE DRIVE CONDITIONS



ACOUSTICAL

SENSITIVITY
DEVICE WILL PRODUCE THE SPL LISTED BELOW UNDER TEST CONDITIONS DESCRIBED IN TABLE 3.
NOMINAL SENSITIVITY AT 1kHz IS dB RELATIVE TO 20µPa. ALL OTHER VALUES
IN dB RELATIVE TO THE SENSITIVITY AT 1kHz.

FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
200	-3.0	0.0	+3.0
500	-1.0	+1.0	+3.0
1000	-2.0	102.5	+2.0
2000 - 3000	+1.0	+4.0	+7.0
4000	-12.0	---	---

PORT LOCATION: 12C

TABLE 1

TOTAL HARMONIC DISTORTION
DEVICE WILL NOT EXCEED TOTAL HARMONIC DISTORTION LEVELS LISTED BELOW.

FREQUENCY (Hz)	AC DRIVE (V rms)	DC BIAS (mA)	LIMIT (%)
500	1.02	0	10
830	0.362	0	5
1250	0.362	0	5

TABLE 2

TEST CONDITIONS

NOMINAL SOURCE VOLTAGE	0.362 V rms, 0mA DC BIAS
SOURCE IMPEDANCE	<1 Ohm
TUBING	10mm [.394"] LONG, 1mm [.039"] I.D.
COUPLER CAVITY	2 CM ³ , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 126)

TABLE 3

ELECTRICAL

DC RESISTANCE	201 OHMS ± 10%
IMPEDANCE @ 500 Hz	265 OHMS ± 15%
IMPEDANCE @ 1 kHz	370 OHMS ± 15%

TABLE 4

ISOLATION: CASE WILL BE ELECTRICALLY ISOLATED FROM THE COIL CIRCUIT.

TEMPERATURE: OPERATING RANGE FROM 0°C TO 63°C (SENSITIVITY WILL NOT VARY BY MORE THAN ±3 dB WITHIN RANGE)
SENSITIVITY AT 0°C IS 2dB LOWER THAN THE SENSITIVITY AT ROOM TEMPERATURE.
DELTA PEAK IS 1dB HIGHER AT BODY TEMPERATURE (37°C)
STORAGE RANGE FROM -40°C TO 63°C.

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
C	C10107990	11-13-08	Active	C
B	C10105824	5-2-07		
A	C10103609	2-2-06		
WHEN TEST LIMITS ARE USED TO ESTABLISH INCOMING INSPECTION ACCEPTANCE/REJECTION CRITERIA, CORRELATION OF TEST EQUIPMENT WITH KNOWLES IS ALSO REQUIRED FOR ELIMINATION OF EQUIPMENT AND TEST METHOD VARIATION			DR. BY	DATE
TITLE: RECEIVER PERFORMANCE SPECIFICATION			CRG	2-2-06
			GJP	2-8-06
FED-27304-104 SHT 2.1			APP. BY	DATE
			GJP	2-8-06

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