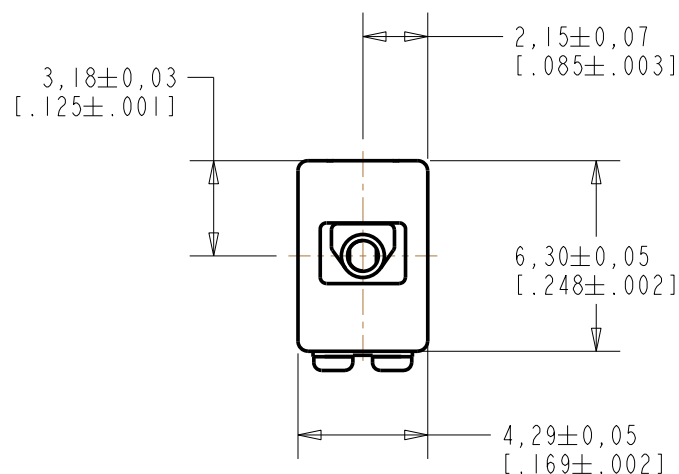


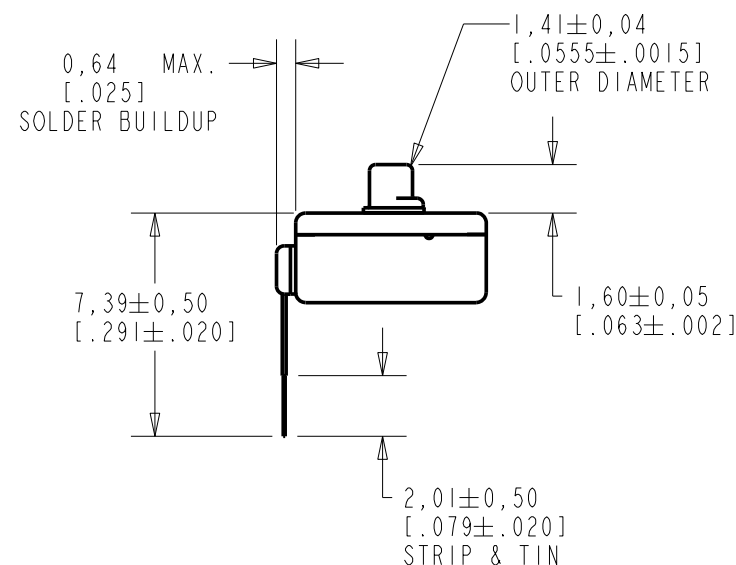
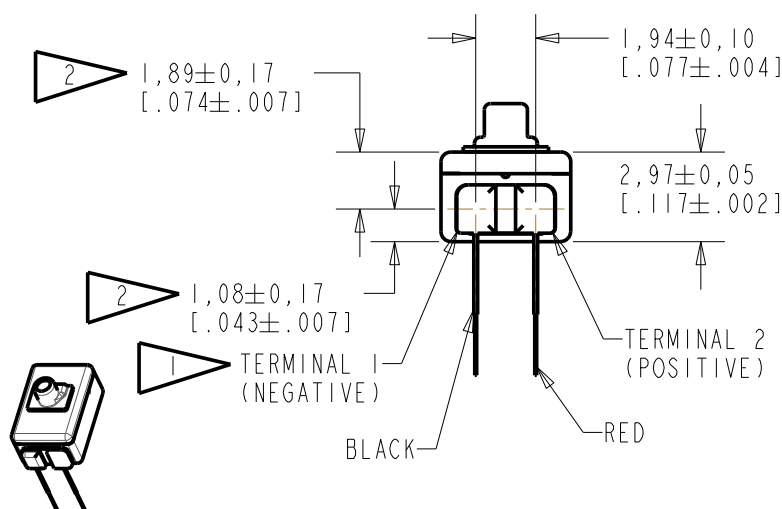
# FED-30353-104

## SHT 1.1



NOTE:

- 1 A POSITIVE GOING VOLTAGE AT TERMINAL 2, RELATIVE TO TERMINAL 1, CAUSES A DECREASE IN PRESSURE AT THE SOUND OUTLET.
- 2 LOCATED FROM TWO SURFACES FOR CUSTOMER CONVENIENCE. ONLY APPLICABLE FROM ONE SURFACE, NOT TO BE USED TOGETHER. HORIZONTAL LOCATION FOR TERMINAL CENTERED TO  $\pm 0,17$  [.007].



NOMINAL WEIGHT  
.31 GRAMS

DIMENSIONS IN MILLIMETERS [INCHES]

**KNOWLES ELECTRONICS**  
ITASCA, ILLINOIS U.S.A.

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
B	C10107990	11-21-08	Active	B
A	C10102782	6-23-05		
SCALE: 2:1			DR. BY	DATE
DO NOT SCALE DRAWING			SDZ	2-19-08
TITLE: RECEIVER  OUTLINE DRAWING			CK. BY	DATE
			GJP	2-20-08
			APP. BY	DATE
			GJP	2-20-08
			SHT 1.1	

KE111ASIZE.FRM

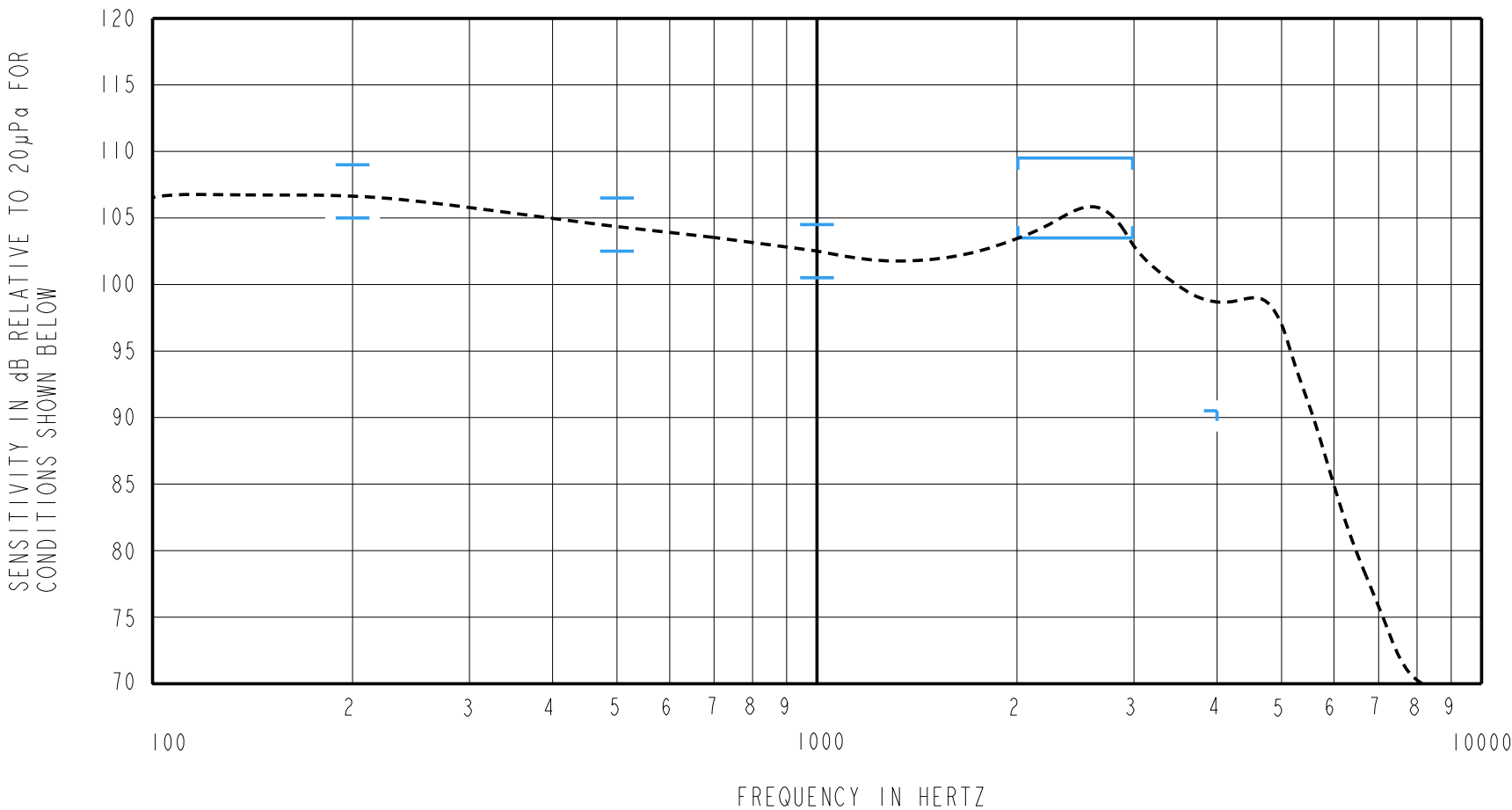
Rev: B

THE FED-30353-104 IS A FERROFLUID DAMPED ED-27305-000 WITHOUT TYPE III DAMPING WITH A PEAK OF 4dB RELATIVE TO THE SENSITIVITY AT 1kHz UNDER CONSTANT VOLTAGE DRIVE CONDITIONS. THIS MODEL HAS INCREASED DCR/IMPEDANCE RATIO AND EXTENDED LOW FREQUENCY RESPONSE.

FERROFLUID DAMPING

FED-30353-104  
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	+2.5	+4.5	+6.5
500	0.0	+2.0	+4.0
1000	-2.0	102.5	+2.0
2000 - 3000	+1.0	+4.0	+7.0
4000	-12.0	---	---

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	0.470	0	10
830	0.167	0	5
1250	0.167	0	5

TABLE 2

TEST CONDITIONS

NOMINAL SOURCE VOLTAGE	0.167 V rms, 0mA DC BIAS
SOURCE IMPEDANCE	<1 Ohm
TUBING	10mm [.394"] LONG, 1mm [.039"] I.D.
COUPLER CAVITY	2 CM <sup>3</sup> , SIMULATED ANSI S3.7 TYPE HA-3 (IEC 126)

TABLE 3

ELECTRICAL

DC RESISTANCE	48 OHMS ± 10%
IMPEDANCE @ 500 Hz	65 OHMS ± 15%
IMPEDANCE @ 1 kHz	100 OHMS ± 15%

TABLE 4

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

TEMPERATURE: OPERATING RANGE FROM 0°C TO 63°C (SENSITVITY 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.

PORT LOCATION: OJP

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ITASCA, ILLINOIS U.S.A.

Revision	C.O. #	Implementation Date	RELEASE LEVEL		REVISION
			Active		B
B	C10107990	11-21-08			
A	C10102782	6-23-05			
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	
			SDZ	2-19-08	
			CK. BY	DATE	
			GJP	2-20-08	
			APP. BY	DATE	
			GJP	2-20-08	

TITLE:	RECEIVER	FED-30353-104
	PERFORMANCE SPECIFICATION	SHT 2.1