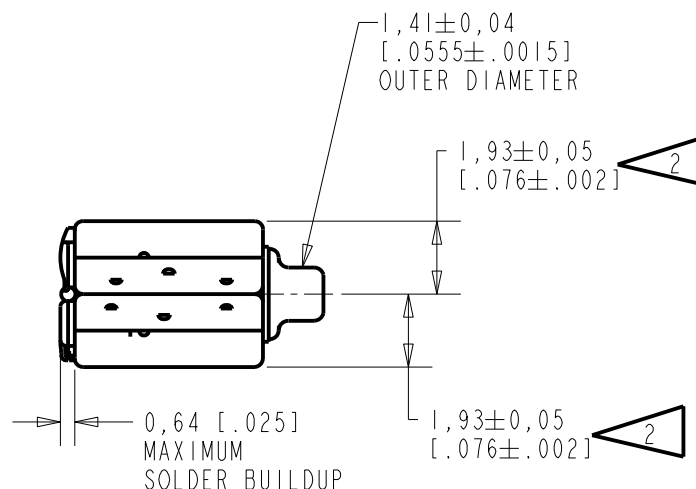
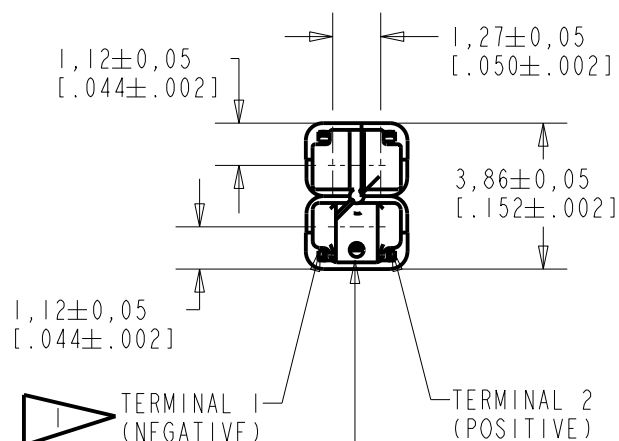


NOTES:

- 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.



SCALE 2:1

DIMENSIONS IN MILLIMETERS [INCHES]

UNUSED TERMINAL  
RUBBER SEAL REMOVED FOR  
BACK VENT BEFORE FINAL TEST

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

Revision	C.O. #	Implementation Date	RELEASE LEVEL	REVISION
			Active	A
A	PI0000077	8-28-15		
SCALE: 5:1			DR. BY DATE	
DO NOT SCALE DRAWING			SSUN	8-28-15
TITLE: RECEIVER OUTLINE DRAWING			CK. BY DATE	
			GJP	8-28-15
			APP. BY DATE	
			GJP	8-28-15
			TWFK-32689-000 SHT 1.1	

UNDAMPED MAGNETIC BALANCED ARMATURE RECEIVERS INTENDED FOR USE AS THE HIGH AND LOW FREQUENCY DRIVERS IN A Hi Fi SYSTEM. THE TWFK IS A WIDEBAND FK AND FK RECEIVER PAIR WITH AN EXTENDED HIGH FREQUENCY RESPONSE AND SHOCK PROTECTION. FK RECEIVER VENTED THROUGH UNUSED TERMINAL.

UNDAMPED

TWFK-32689-000  
SHEET 2.1

NOTE: SPECIFICATIONS FOLLOWED BY AN ASTERISK (\*) ARE 100% TESTED.

CONSTANT VOLTAGE DRIVE CONDITIONS (WITH VENT OPEN).

SENSITIVITY IN dB RELATIVE TO 20μPa FOR CONDITIONS SHOWN BELOW

110 dB

105

100

95

90

85

80

75

70

100

2

3

4

5

6

7

8

9

1000

2

3

4

5

6

7

8

9

10000

FREQUENCY IN HERTZ

ACOUSTICAL

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

FREQUENCY (Hz)	MINIMUM	NOMINAL	MAXIMUM
200	-1.5	+1.5	+4.5
500	-1.0	+1.0	+3.0
1000	-2.0	100.0	+2.0
1900-2500	+0.5	+3.5	+6.5
4500	-10.0	---	---
5700-6700	-7.0	-4.0	-1.0

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 (%)
1/3 PEAKI (TYP. 722)	.085	0	5
1/2 PEAKI (TYP. 1083)	.085	0	5
1/3 PEAKI (TYP. 722)	.240	0	10
1/2 PEAKI (TYP. 1083)	.240	0	10

TABLE 2

TEST CONDITIONS  
0.82μF CAPACITOR CONNECTED TO THE INPUT OF THE WBFK RECEIVER

NOMINAL SOURCE VOLTAGE	.085 V rms, 0 V 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 60318-5)

TABLE 3

ELECTRICAL

DC RESISTANCE	25 Ohms ± 10%* 25 Ohms FK / 12.5 Ohms WBFK
IMPEDANCE @ 500 Hz	31.0 Ohms ± 15%*
IMPEDANCE @ 1kHz	43.0 Ohms ±15%*

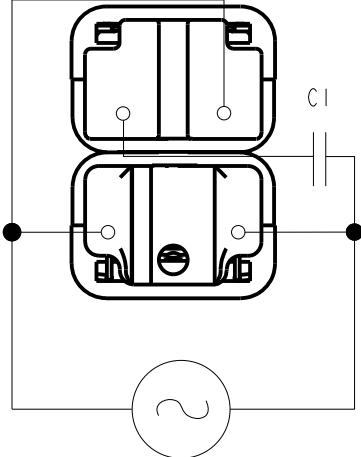
TABLE 4

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

MECHANICAL

PORT LOCATION: 12S  
SOLDER TYPE: SAC305

TEMPERATURE:  
OPERATING: SENSITIVITY AT 500Hz WILL NOT VARY BY MORE THAN ±3 dB FROM 0°C TO 63°C.  
STORAGE: -40°C TO 63°C.



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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

TITLE: RECEIVER  
PERFORMANCE SPECIFICATION

TWFK-32689-000  
SHT 2.1

DR. BY  
SSUN

DATE  
8-28-15

CK. BY  
GJP

DATE  
8-28-15

APP. BY  
GJP

DATE  
8-28-15