

# KNOWLES Dampers and Microphones



This product is RoHS compliant.

## DAMPERS

Damping elements are used between the receiver outlet and the ear canal to smooth out the frequency response. Various acoustical resistances and sizes are available.

### Features:

- Damping plug has metal ferrule housing, 2.08mm nominal O.D. by 1.78mm nominal I.D. for mounting to acoustic tubing
- Damping screens are acoustic cloth screens only for insertion inside acoustic tubing
- Other resistances or diameters available upon request



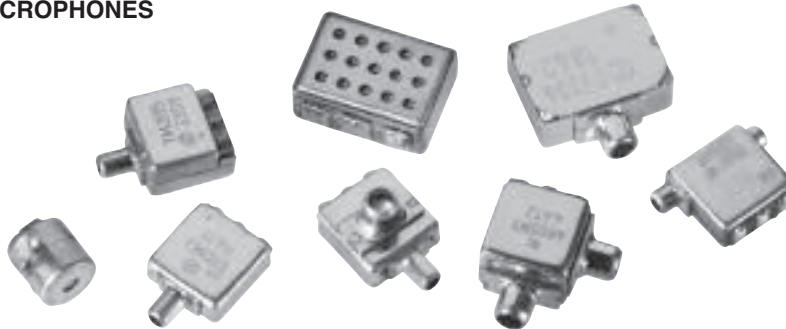
RoHS Compliant

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Knowles Part No.	Dimensions: mm	Resistance	Color	Price Each		
					1	10	25
<a href="#">721-BF-1859-000</a>	BF-1859-000	2.08 dia x 2.44	680	White	107.20	95.29	90.52
<a href="#">721-BF-1860-000</a>	BF-1860-000	2.08 dia x 2.44	1000	Brown	107.20	95.29	90.52
<a href="#">721-BF-1861-000</a>	BF-1861-000	2.08 dia x 2.44	1500	Green	107.20	95.29	90.52
<a href="#">721-BF-1921-000</a>	BF-1921-000	2.08 dia x 2.44	2200	Red	107.20	95.29	90.52
<a href="#">721-BF-1922-000</a>	BF-1922-000	2.08 dia x 2.44	3300	Orange	107.20	95.29	90.52
<a href="#">721-BF-1923-000</a>	BF-1923-000	2.08 dia x 2.44	4700	Yellow	107.20	95.29	90.52
<a href="#">721-BF-1999-000</a>	BF-1999-000	2.08 dia x 2.44	330	Grey	107.20	95.29	90.52

## SUBMINIATURE PERFORMANCE MICROPHONES

Hundreds of design possibilities can be applied to your product challenge with our high-performance microphone designs. Ideal for new product ideas that require premium audio and very small form factors, solutions include noise canceling, omni-directional and unidirectional performance. Other variables include size, shape, amplification, sensitivity, low noise, and resistance to vibration and mechanical shock.



RoHS Compliant

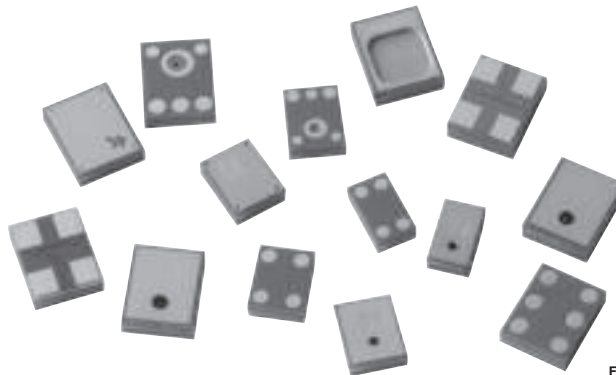
For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Knowles Part No.	Dimensions: mm	1 kHz Sensitivity	Port Location	Response	Directional	Peak Frequency	Noise Max. (Input Ref.)	Noise Max. (Output Noise)	Price Each		
										1	10	25
<a href="#">721-BJ-21590-000</a>	BJ-21590-000	7.92 x 5.70 x 4.14	-75	0Jn	Bandpass	Omni-directional	2000	-	-	34.16	30.36	27.33
<a href="#">721-EM-23046-P16</a>	EM-23046-P16	3.61 x 3.61 x 2.21	-56	12B	Standard	Omni-directional	5000	31 dB	-	25.11	22.32	21.20
<a href="#">721-FG-23629-C36</a>	FG-23629-C36	2.59 dia x 2.59	-53	0KN	Flat	Omni-directional	10000	28 dB	-	28.52	25.35	24.08
<a href="#">721-FG-23629-P16</a>	FG-23629-P16	2.59 dia x 2.59	-53	0KN	Flat	Omni-directional	10000	28 dB	-	28.52	25.35	24.08
<a href="#">721-FG-23742-D36</a>	FG-23742-D36	2.59 dia x 2.59	-63	0KN	Flat	Omni-directional	10000	36 dB	-	28.52	25.35	22.81
<a href="#">721-NR-23160-000</a>	NR-23160-000	4.00 x 5.59 x 2.28	-52	JA/KA	Flat	Noise-Cancelling	-	-	-100 dB	20.69	18.39	17.47
<a href="#">721-EK-23024-P07</a>	EK-23024-P07	5.56 x 3.98 x 2.21	-53	12S	Standard	Omni-directional	5500	26 dB	-	22.03	19.58	17.63
<a href="#">721-EK-23132-C36</a>	EK-23132-C36	5.56 x 3.98 x 2.21	-53	KA	Broadband	Omni-directional	10000	26 dB	-	29.07	27.06	25.07

## MEMS MICROPHONES

### Features:

- Bottom port "Zero Height" microphones for thinnest ever designs
- UltraMini footprint - less than 11.5mm<sup>2</sup>
- Digital mics eliminate analog noise
- Integrated designs with amplified or differential outputs



RoHS Compliant

For quantities of 50 and up, call for quote.

MOUSER STOCK NO.	Knowles Part No.	Dimensions: mm	RF Immunity	Port Location	Signal Processing / Output	Normal Sensitivity @ 1kHz (db V/Pa)	Price Each		
							1	10	25
<a href="#">721-SPM0404HD5H</a>	SPM0404HD5H	4.72 x 3.76 x 1.10	Standard	Top	Analog	-42	3.10	2.76	2.62
<a href="#">721-SPM0404HE5H</a>	SPM0404HE5H	4.72 x 3.76 x 1.10	Enhanced	Top	Analog	-42	3.40	3.03	2.87
<a href="#">721-SPM0404LE5H</a>	SPM0404LE5H	4.72 x 3.76 x 1.10	Enhanced	Bottom	Analog	-38	3.51	3.12	2.97
<a href="#">721-SPM0405HD4H</a>	SPM0405HD4H	4.72 x 3.76 x 1.10	Standard	Top	Digital	-26 dBFS	4.27	3.80	3.61
<a href="#">721-SPM0406HE3H</a>	SPM0406HE3H	4.72 x 3.76 x 1.10	Enhanced	Top	Analog Differential	-22	4.01	3.57	3.39
<a href="#">721-SPM0408HD5H</a>	SPM0408HD5H	4.72 x 3.76 x 1.10	Standard	Top	Analog Amplified	-22	3.39	3.01	2.86
<a href="#">721-SPM0408HE5H</a>	SPM0408HE5H	4.72 x 3.76 x 1.10	Enhanced	Top	Analog Amplified	-22	3.86	3.43	3.26
<a href="#">721-SPU0409LE5H</a>	SPU0409LE5H	3.76 x 2.95 x 1.10	Enhanced	Bottom	Analog	-38	8.00	6.67	5.57