

Panasonic® Electret Condenser Microphone Cartridge

Consists of a high voltage internal electret membrane, metal electrode and a Field Effect Transistor (FET). Doesn't need a high-voltage bias from the outside like ordinary condenser microphones. **Features:** Highly efficient electrical specification, pressure type operating principle, low impedance (2.2k Ω), omnidirectional back directivity and a high degree of reliability

under adverse shock, vibration and environmental tests. **Applications:** Telephone and telephone answering devices, tape recorders, intercoms, computer modems, completed microphones for recording, testing and monitoring, hearing aids, sonic controlled toys and sensors and others. All buzzers and microphones are non-washable.

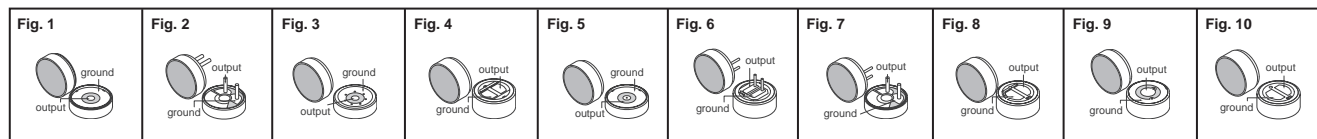
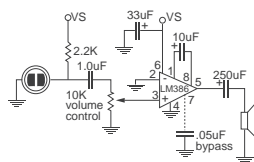
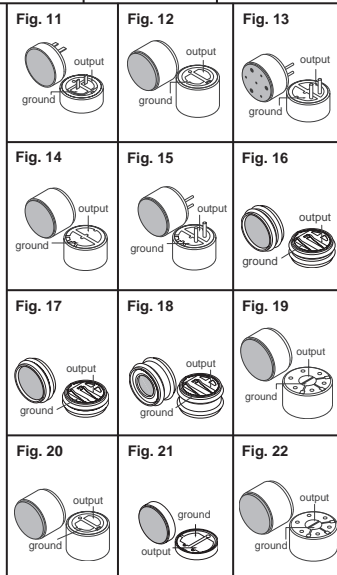


Fig.	Type	Physical Size (mm)	Sensitivity (0dB = 1V/Pa)	Frequency Range (Hz)	Operating Voltage Max./Std.	Current Consumption Max.	Sensitivity Reduction	S/N Ratio	Digi-Key Part No.	Price Each	1	10	100	Panasonic Part No.
1	Omnidirectional	06.0 X 1.3	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11957-ND1	2.28	2.02	1.64	WM-63GCT	
2		06.0 X 1.3	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11958-ND1	2.36	2.09	1.69	WM-63GNT	
3		06.0 X 1.3	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11961-ND	2.71	2.41	1.95	WM-63PRT	
4	Omnidirectional	06.0 X 1.5	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11962-ND	2.23	1.98	1.60	WM-E15BT	
5		06.0 X 2.2	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11963-ND	1.64	1.46	1.19	WM-64AT	
6		06.0 X 2.2	-45dB \pm 4dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P9955-ND1	1.65	1.47	1.19	WM-64C	
7	Omnidirectional	06.0 X 2.2	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P9958-ND1	1.64	1.46	1.18	WM-64K	
8		06.0 X 2.2	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11964-ND1	1.60	1.42	1.15	WM-64MCT	
9		06.0 X 2.2	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11965-ND1	1.62	1.44	1.17	WM-64MNT	
10	Omnidirectional	06.0 X 2.2	-46dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11967-ND1	1.93	1.72	1.39	WM-64PCT	
11		06.0 X 2.2	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11969-ND1	2.21	1.96	1.58	WM-64PNT	
12		06.0 X 2.7	-45dB \pm 4dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P9926-ND1	1.64	1.46	1.18	WM-62CC	
13	Omnidirectional	06.0 X 2.7	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11970-ND1	1.64	1.46	1.18	WM-62HNT	
14		06.0 X 3.4	-35dB \pm 4dB	20-20k	10V/2V	0.5mA	within -3dB @ 1.5V	>62dB	P9925-ND	1.47	1.31	1.06	WM-61A	
15		06.0 X 3.4	-35dB \pm 4dB	20-20k	10V/2V	0.5mA	within -3dB @ 1.5V	>62dB	P11974-ND	1.68	1.49	1.21	WM-61B	
16	Omnidirectional	06.0 X 5.0	-42dB \pm 3dB	20-20k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P9959-ND	2.13	1.89	1.53	WM-60AY	
17		09.7 X 4.5	-44dB \pm 3dB	20-16k	10V/2.5V	0.6mA	within -3dB @ 2V	>60dB	P9949-ND	.66	.59	.48	WM-54BT	
18		09.7 X 6.7	-42dB \pm 3dB	20-16k	10V/4.5V	0.8mA	within -3dB @ 3V	>60dB	P9962-ND*	2.23	1.99	1.61	WM-034CY195M	
19	Omnidirectional	09.7 X 6.7	-42dB \pm 3dB	20-16k	10V/4.5V	0.8mA	within -3dB @ 3V	>60dB	P9931-ND	1.02	.91	.73	WM-034BY	
20		07.7 X 3.0	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11959-ND	3.85	3.42	2.77	WM-63GNT330	
21		07.5 X 2.4	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11960-ND	4.04	3.58	2.90	WM-63GNT335	
22	Unidirectional	07.7 X 4.0	-44dB \pm 3dB	20-16k	10V/2V	0.5mA	within -3dB @ 1.5V	>58dB	P11966-ND	3.03	2.69	2.18	WM-64MNT330A	
19		09.7 X 5.0	-47dB \pm 4dB	100-16k	10V/1.5V	0.5mA	within -3dB @ 1V	>60dB	P9961-ND	2.08	1.85	1.50	WM-55A103	
20		09.7 X 5.0	-50dB \pm 3dB	100-16k	10V/1.5V	0.5mA	within -3dB @ 1V	>60dB	P9963-ND	1.50	1.34	1.08	WM-56A103	
21	Noise Canceling	06.0 X 5.0	-50dB \pm 4dB	100-12k	10V/2V	0.5mA	within -3dB @ 1.5V	>55dB	P9964-ND	1.68	1.49	1.21	WM-65A103	
22		06.0 X 2.2	-51dB \pm 4.5dB	100-10k	10V/2V	0.5mA	within -3dB @ 1.5V	>50dB	P9973-ND	1.76	1.57	1.27	WM-67D103	
		09.7 X 5.0	-54dB \pm 4dB	100-10k	10V/1.5V	0.5mA	within -3dB @ 1V	>58dB	P9897-ND	2.14	1.91	1.54	WM-55D103	

* Has 18mm long leads \uparrow With built-in cap



Microphone Holders

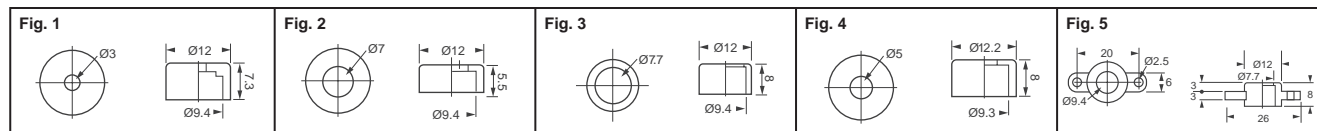


Fig.	Digi-Key Part No.	Price Each	1	10	100	500	Panasonic Part No.	Use With Panasonic Part No.
1	P9950-ND	.48	.40	.32	.22		M3CA0208A4	WM-52BM, WM-54BT, WM-55A103, WM-55D103, WM-56A103
2	P9952-ND	.48	.40	.32	.22		M3CA0207A4	WM-52BM, WM-54BT, WM-55A103, WM-55D103, WM-56A103
3	P9974-ND	.48	.40	.32	.22		YPM-CH022AA4	WM-034 Series
4	P9953-ND	.48	.40	.32	.22		M3CA0082A4	WM-034 Series
5	P9899-ND	.48	.40	.32	.22		YPM-CH009AA4	WM-034 Series

Electret Condenser Microphone and Holder

Electret condenser microphones consist of a high voltage internal electret membrane, a metal electrode and a field effect transistor (FET). They are manufactured in a quality controlled facility in China. All microphones are produced with Japanese made FETs to ensure high quality and reliability. This along with 100% testing ensure a zero defect rate. Horn's commitment to quality has earned them approval from a famous global manufacturer of mobile phones. Horn's ECMs utilize a highly efficient, low impedance design, available in omni directional, unidirectional and noise canceling versions. All microphones are non-washable.

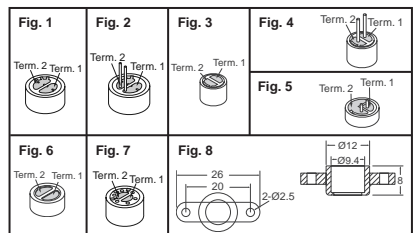


Fig.	Type	Physical Size (mm)	Sensitivity (0dB = 1V/Pa)	Frequency Range (Hz)	Operating Voltage Std.	Current Consumption Max.	S/N Ratio	Digi-Key Part No.	Price Each	1	10	100	Horn Part No.
1	Omnidirectional	09.7 x 6.5	-42dB \pm 2dB	100 - 9k	4.5V	0.5mA	>60dB	359-1001-ND	79	60	40	EM9765-422	
2		09.7 x 6.5	-42dB \pm 2dB	100 - 9k	4.5V	0.5mA	>60dB	359-1002-ND	79	60	40	EM9765P-422	
1		09.7 x 4.5	-44dB \pm 2dB	100 - 9k	4.5V	0.5mA	>60dB	359-1006-ND	89	67	45	EM9745-442	
2		09.7 x 4.5	-44dB \pm 2dB	100 - 9k	4.5V	0.5mA	>60dB	359-1007-ND	97	73	49	EM9745P-442	
1		09.4 x 6.5	-44dB \pm 2dB	100 - 9k	4.5V	0.5mA	>60dB	359-1008-ND	93	70	47	EM9465-442	
2	Omnidirectional	09.4 x 6.5	-44dB \pm 2dB	100 - 9k	4.5V	0.5mA	>60dB	359-1009-ND	1.01	.76	.51	EM9465P-442	
3		06.0 x 5.0	-42dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1011-ND	1.01	.76	.51	EM6050-423	
4		06.0 x 5.0	-44dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1012-ND	1.01	.76	.51	EM6050-443	
4		06.0 x 5.0	-42dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1013-ND	1.08	.81	.54	EM6050P-423	
4		06.0 x 5.0	-44dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1014-ND	1.08	.81	.54	EM6050P-443	
3	Omnidirectional	06.0 x 3.5	-38dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1017-ND	2.44	1.83	1.22	EM6035-383	
3		06.0 x 3.5	-40dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1018-ND	2.44	1.83	1.22	EM6035-403	
5		06.0 x 2.7	-42dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1019-ND	2.44	1.83	1.22	EM6027-423	
5		06.0 x 2.7	-42dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1020-ND	2.73	2.05	1.37	EM6027PA-423	
6		04.5 x 3.0	-44dB \pm 3dB	100 - 15k	2.0V	0.5mA	>60dB	359-1021-ND	2.88	2.16	1.44	EM4530-443	
7	Unidirectional	09.7 x 5.2	-47dB \pm 4dB	50 - 15k	1.5V	0.5mA	>58dB	359-1003-ND	2.73	2.05	1.37	EM9752U-474	
7		09.7 x 5.2	-51dB \pm 4dB	50 - 15k	1.5V	0.5mA	>58dB	359-1004-ND	2.73	2.05	1.37	EM9752U-514	
3		08.0 x 5.0	-51dB \pm 4dB	50 - 15k	1.5V	0.5mA	>60dB	359-1010-ND	2.73	2.05	1.37	EM8050U-514	
3		06.0 x 5.0	-51dB \pm 4dB	50 - 15k	2.0V	0.5mA	>58dB	359-1016-ND	2.59	1.94	1.30	EM6050U-514	
7		09.7 x 5.2	-47dB \pm 4dB	50 - 15k	1.5V	0.5mA	>58dB	359-1003-ND	2.73	2.05	1.37	EM9752U-474	
7	Noise Canceling	09.7 x 5.2	-51dB \pm 4dB	100 - 8k	1.5V	0.5mA	>60dB	359-1005-ND	2.66	2.00	1.33	EM9752N-514	
8		06.0 x 5.0	-51dB \pm 4dB	100 - 8k	2.0V	0.5mA	>58dB	359-1015-ND	2.59	1.94	1.30	EM6050N-514	
								Microphone holder for 9mm Microphone	359-1022-ND	.35	.21	.14	01AE.MT.946502