

Address:
BLOCK 1, DEHUINA INDUSTRIAL DISTRICT,
MINGZHI RD LONGHUA, SHENZHEN,
GUANGDONG, CHINA 518131

TEL: (86) 755-8192552 8190943
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E-mail: szwwiner @ public.szptt.net.cn
HOME PAGE: www.globalsources.com/hornmic.co

CUSTOMER: Digi-Key Corporation

APPROVE SHEET

PRODUCT NAME	TYPE	DIMENSION	
Electret Condenser Microphone	EM9745P-44	Ø9.7×4.5(mm)	PIN TYPE

APPROVED :

李 军

DATE: 2000.11.25

CHECKED BY:

陈 一 波

DATE: 2000.11.25

ISSUED BY:

陳為波

DATE:



APPROVED BY

DATE:

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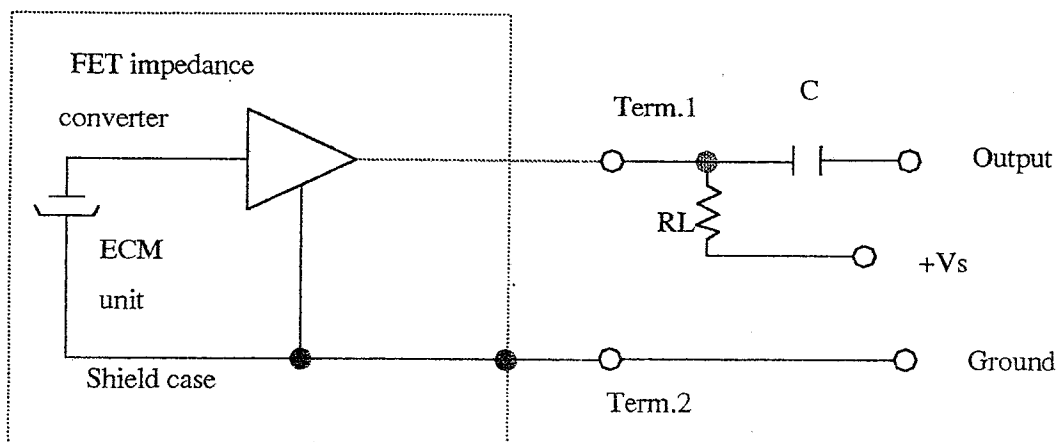
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SPECIFICATION

Item	Symbol	Test conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1KHz. Pin=1pa	-46	-44	-42	dB 0dB=1V/pa
Directivity	Omnidirectional					
Impedance	Zout				2.2	K Ω
Current consumption	I	f=1KHz. Pin=1pa			450	uA
Sensitivity reduction	ΔS	f=1KHz. Pin=1pa. Vs=4.5→1.5V			-3	dB
S/N ratio	S/N(A)	f=1KHz. Pin=1pa. A=curve	60			dB

Measurement Circuit (Test Condition Vs=4.5V RL=2.2K Ω)

Ta=20°C R.H=65%)

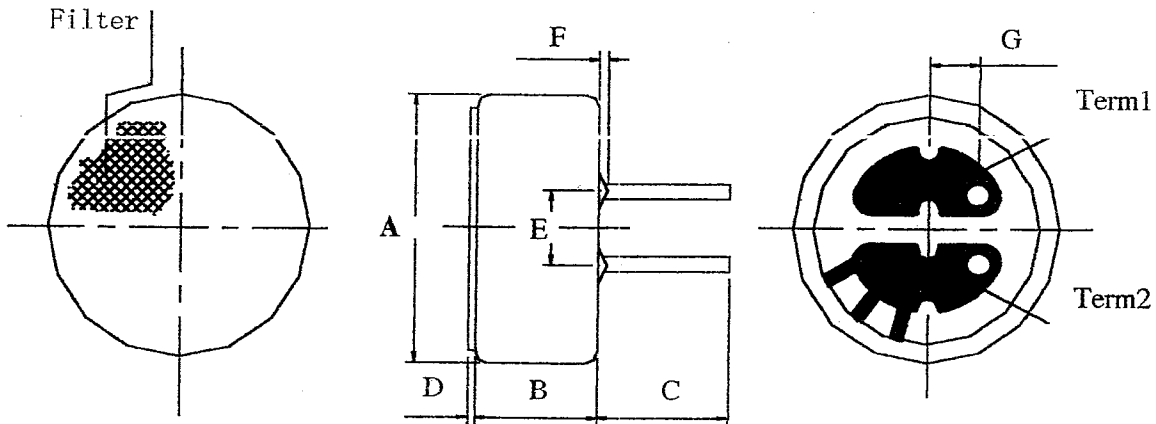


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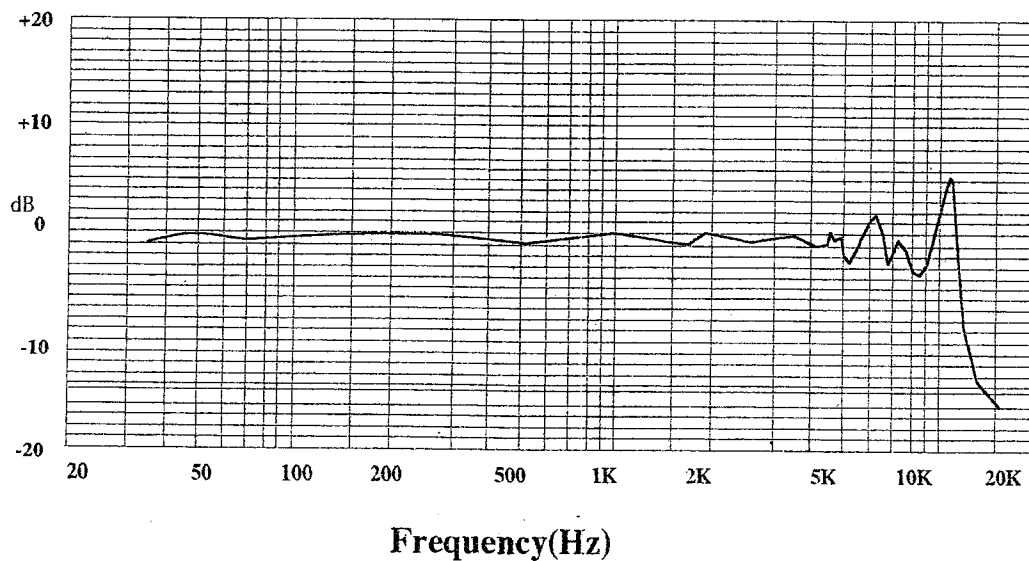
Dimensional Drawing

unit: mm



PART	MIN	TYPE	MAX	REMARK
A	Ø9.6	Ø9.7	Ø9.8	
B	4.3	4.5	4.7	
C	4	5	6	
D	-	-	0.2	
E	-	2.54	-	
F			0.6	
G	1.9	2	2.1	

Typical Frequency Response Curve



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Ambient condition

(1) Operating condition

Ambient temperature: $-10^{\circ}\text{C} \sim +45^{\circ}\text{C}$
Relative humidity: $\leq 85\%$

(2) Storage condition

Ambient temperature: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$
Relative humidity: 45%

Reliability Test

1) Vibration Test

To be no interference in operation after vibration of full amplitude 2mm for 30 minutes at three axis, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity.

2) Drop test

To be no interference in operation after dropped to concrete floor each time from 1 meter height of three directions in state of packing, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity.

3) High Temperature Storage:

To be no interference in operation after high temperature test $70^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 48 hours. The sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity.

4) Isotherm & Iso-humidity Storage

To be no interference in operation after storage test at temperature $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and relative humidity ($93\% \pm 2\sim 3\%$) for 48 hours, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity, the test is performed at temperature 20°C after operation for 2 hours.

5) Low Temperature Storage

To be no interference in operation after test at temperature $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 4 hours, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity

6) Temperature Cycle Test

After exposure at $55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour, at $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour, at $-10^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour, at $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour, with 5 cycles. Change of sensitivity within $\pm 3\text{dB}$ from initial measuring should be done after 2 hours exposed to $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$.

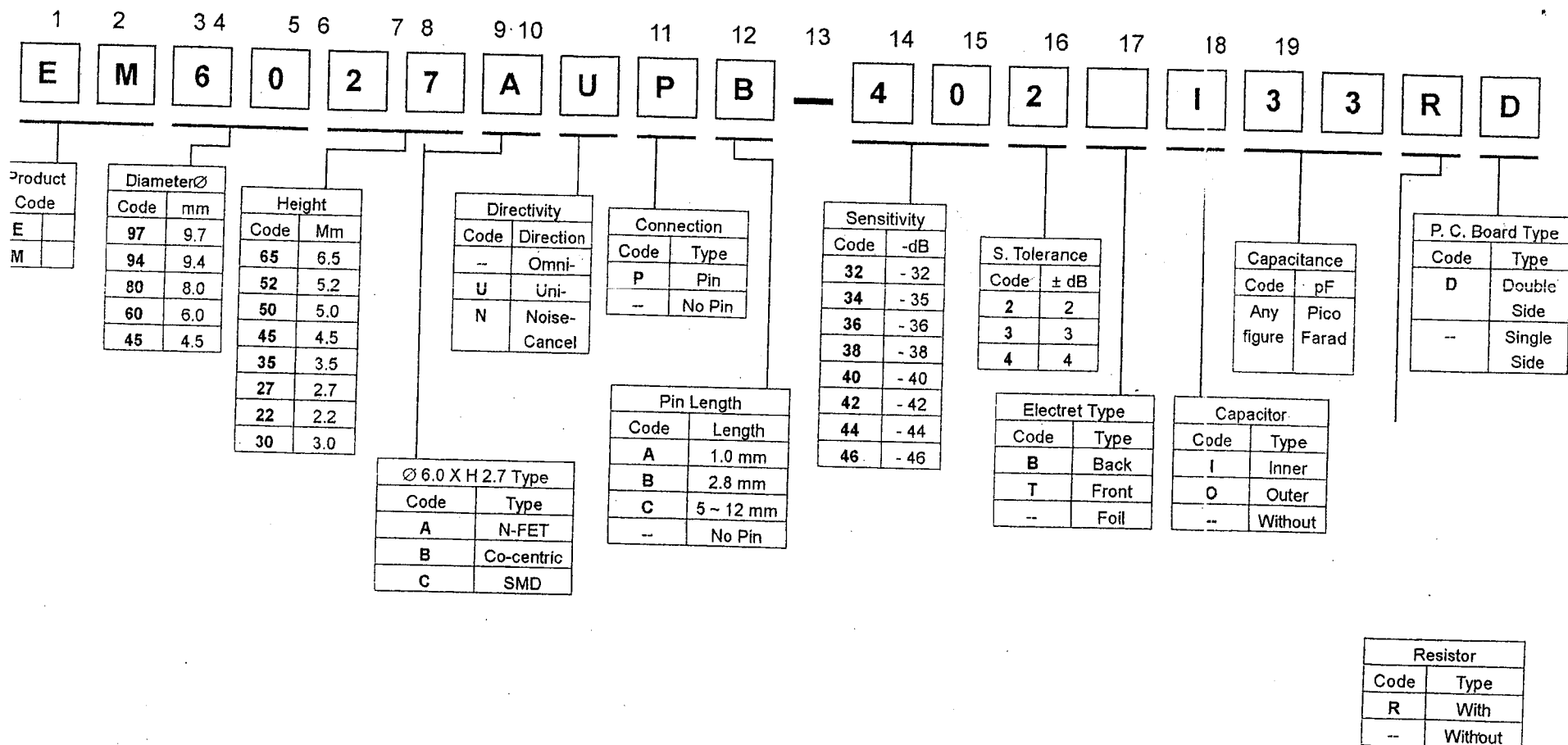
7) Collision Test

After collided with the acceleration $100 \pm 10\text{m/s}$, at the vertical & horizontal directions for 1000 ± 10 times. at the state of packing. Change of sensitivity within $\pm 3\text{dB}$ from initial.

HORN *Shenzhen Horn Industrial Co., Ltd.*

Explanation of Part Number

Explanation of Part Number



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CUSTOMER: Digi-Key Corporation

APPROVE SHEET

PRODUCT NAME	TYPE	DIMENSION	
Electret Condensèr Microphone	EM9752N-51	Ø9.7×5.2(mm)	

APPROVED :

李 華

DATE: 2000.11.25

CHECKED BY:

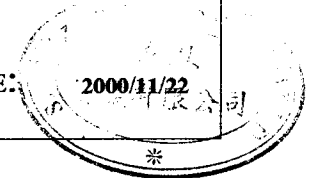
阮 小 康

DATE: 2000.11.25

ISSUED BY:

陳為波

DATE: 2000/11/22



APPROVED BY

DATE:

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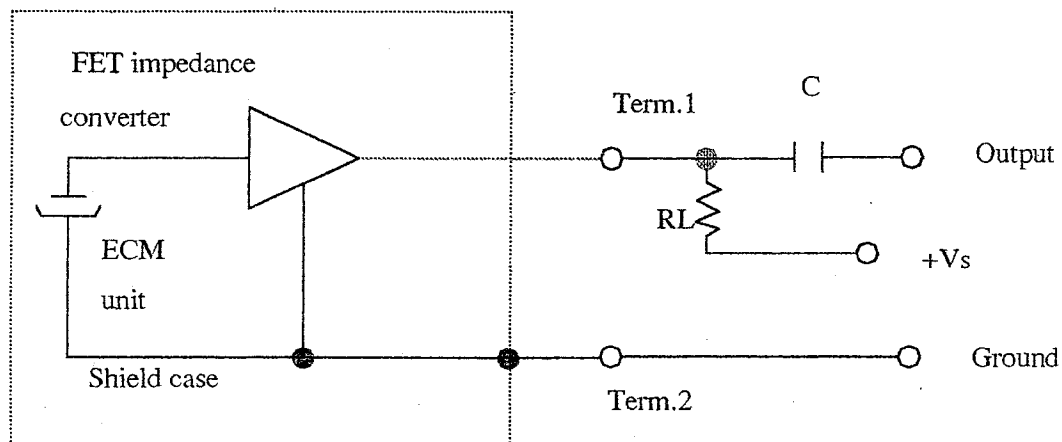
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SPECIFICATION

Item	Symbol	Test conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1KHz. Pin=1pa	-55	-51	-47	dB 0dB=1V/pa
Directivity		Noise canceling				
Impedance	Zout				680	Ω
Current consumption	I	f=1KHz. Pin=1pa			500	μ A
Sensitivity reduction	Δ S	f=1KHz. Pin=1pa. Vs=1.5→1V			-3	dB
S/N ratio	S/N(A)	f=1KHz. Pin=1pa. A=curve	58			dB

Measurement Circuit (Test Condition Vs=1.5V RL=680 Ω)

Ta=20℃ R.H=65%)

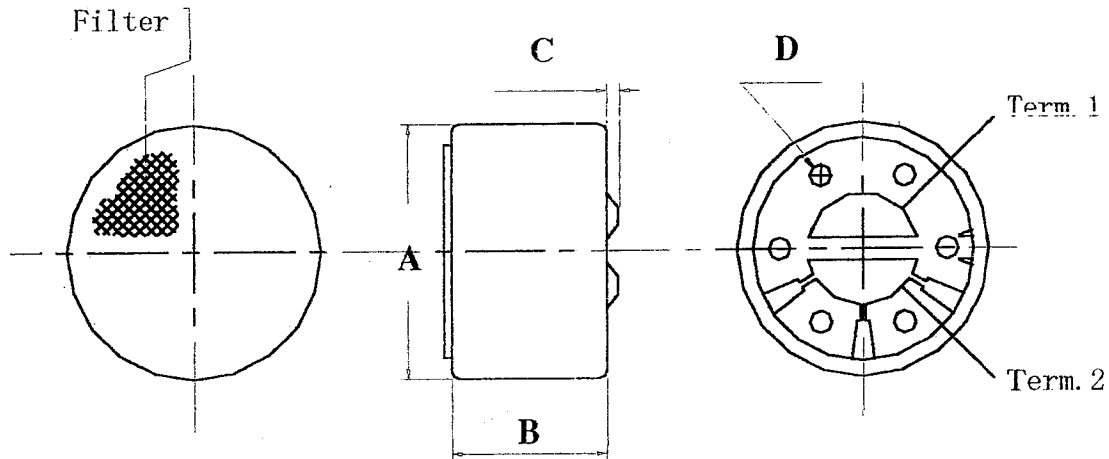


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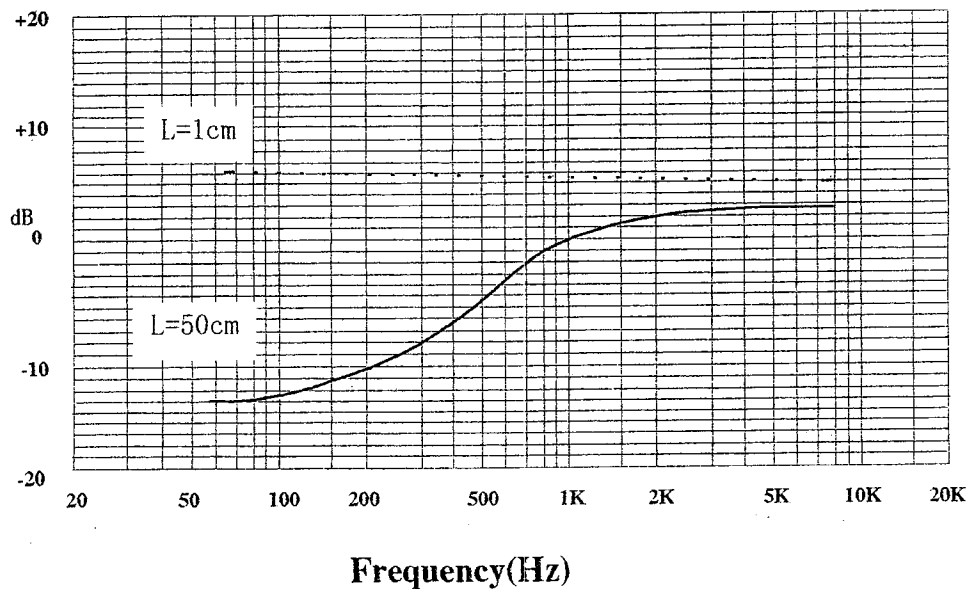
Dimensional Drawing

unit: mm



PART	MIN	TYPE	MAX	REMARK
A	Ø9.6	Ø9.7	Ø9.8	
B	5.0	5.2	5.4	
C	-	-	0.7	
D	Ø0.8	-	Ø1.2	

Typical Frequency Response Curve



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3) High Temperature Storage:

To be no interference in operation after high temperature test $70^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 48 hours. The sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity.

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To be no interference in operation after storage test at temperature $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and relative humidity ($93\% \pm 2\sim 3\%$) for 48 hours, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity, the test is performed at temperature 20°C after operation for 2 hours.

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To be no interference in operation after test at temperature $-20^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 4 hours, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity

6) Temperature Cycle Test

After exposure at $55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour, at $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour, at $-10^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour, at $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 1 hour, with 5 cycles. Change of sensitivity within $\pm 3\text{dB}$ from initial measuring should be done after 2 hours exposed to $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$.

7) Collision Test

After collided with the acceleration $100 \pm 10\text{m/s}$, at the vertical & horizontal directions for 1000 ± 10 times. at the state of packing. Change of sensitivity within $\pm 3\text{dB}$ from initial.

HORN Shenzhen Horn Industrial Co., Ltd.

Explanation of Part Number

Explanation of Part Number

1	2	3 4	5 6	7 8	9 10	11	12	13	14	15	16	17	18	19					
E	M	6	0	2	7	A	U	P	B	—	4	0	2		I	3	3	R	D
Product Code		DiameterØ		Height		Directivity		Connection		Sensitivity		S. Tolerance		Capacitance		P. C. Board Type			
E		Code	mm	Code	Mm	Code	Direction	Code	Type	Code	-dB	Code	± dB	Code	pF	Code	Type		
M		97	9.7	65	6.5	—	Omni-	P	Pin	32	-32	2	2	Any figure	Pico Farad	D	Double Side		
		80	8.0	52	5.2	U	Uni-	—	No Pin	34	-35	3	3			—	Single Side		
		60	6.0	50	5.0	N	Noise-Cancel			36	-36	4	4						
		45	4.5	45	4.5	Ø 6.0 X H 2.7 Type		Pin Length		38	-38	Electret Type		Capacitor					
		35	3.5	40	-40														
		27	2.7	42	-42														
		22	2.2	44	-44														
		30	3.0	46	-46														
				Code	Type	Code	Length			Code	Type	Code	Type						
				A	N-FET	A	1.0 mm			B	Back	I	Inner						
				B	Co-centric	B	2.8 mm			T	Front	O	Outer						
				C	SMD	C	5 ~ 12 mm			—	Foil	—	Without						
						—	No Pin												

Resistor	
Code	Type
R	With
—	Without