

Ultrasonic 18

Open Structure Ultrasonic Sensor

	Size (mm)	Height (mm)	Function	Sound Pressure Level (dB)	Sensitivity (dB)	Center Frequency (KHz)	Capacitance (pF)	Page No.
SU052S-TR40AS	5.2x5.2	1.4	Dual	97	-68	40	3800	106
SU010S-TR40PB	10x10	3.5	Dual	105	-75	40	12000	106
SU010SA-TR40PB	10x10	5.3	Dual	110	-70	40	2700	106
U010-TR40PBP	Ø9.8	7	Dual	108	-67	40	2200	106
U010-TR40ASP	Ø9.8	7	Dual	108	-67	40	2200	107
U012-TR40ABP	Ø12.6	9.5	Dual	115	-65	40	2100	107
U016-T25PBP	Ø16	12	Transmitter	110	Nil	25	2500	107
U016-TR40PBP	Ø16	12	Dual	115	-65	40	2200	107
U016-T25ASP	Ø16	12	Transmitter	110	Nil	25	2500	107
U016-TR40ASP	Ø16	12	Dual	123	-57	40	2400	107

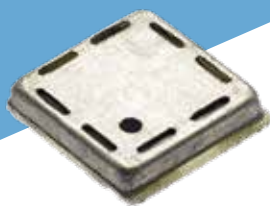
Close Structure Ultrasonic Sensor

	Size (mm)	Height (mm)	Function	Sound Pressure Level (dB)	Sensitivity (dB)	Center Frequency (Hz)	Capacitance (pF)	Page No.
UC10-TR40ASP	Ø10	8	Dual	100	-78	40	1800	108
UC12G-TR40ABP	Ø12	9	Dual	100	-82	40	1800	108
UC14L-TR40ASP	Ø14.4	9	Dual	95	-74	40	1800	108
UC16-TR40ASP	Ø16	9	Dual	100	-75	40	1800	108
UC16L-TR40ABP	Ø16	12	Dual	95	-75	40	1800	109
UC18G-TR40ASP	Ø18	9	Dual	100	-80	40	1800	109
UC180-TR40ABP	Ø18	12	Dual	100	-70	40	1800	109
UC25-TR40ASP	Ø25	12	Dual	120	-90	40	2200	109

Ultrasonic Speaker

	Size (mm)	Height (mm)	Function	Sound Pressure Level (dB)	Resonant Frequency (KHz)	Rated Voltage (Vp-p)	Capacitance (pF)	Page No.
USM38-25	Ø38	12.5	Transmitter	90 / 30cm	25	9	100000	110
USM38-40	Ø38	12.5	Transmitter	100 / 20cm	40	9	100000	110
USL41-25	Ø41	14.5	Transmitter	90 / 30cm	25	9	100000	110
USL51-20	Ø51	18	Transmitter	95 / 30cm	20	9	100000	110
USM51E-20	Ø51	18	Transmitter	95 / 30cm	20	9	100000	110

SU052S Series

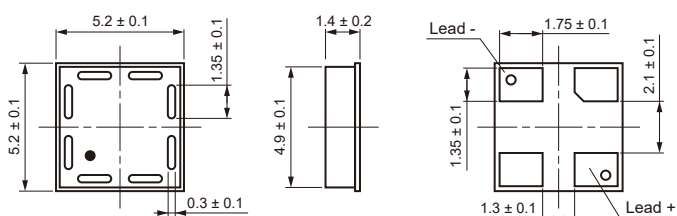


Housing	Aluminum
Color	Silver
Terminal	SMT

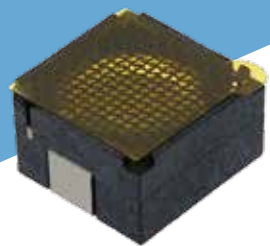
SU052S-TR40AS

Function	Dual
Center Frequency [KHz]	40
Sensitivity For Receiver [dB]	Min. -68
Sound Pressure Level [dB]	Min. 97 [6Vp-p / 15cm]
Capacitance [pF]	3800
Input Voltage [Vp-p]	Max. 10
Operating Temperature [°C]	-20 ~ +70
Weight [g]	0.1

Dimensions [size : 5.2 X 5.2 X 1.4 mm]

Unit: mm / Tolerance $\pm 0.3\text{mm}$ 

SU010SA Series

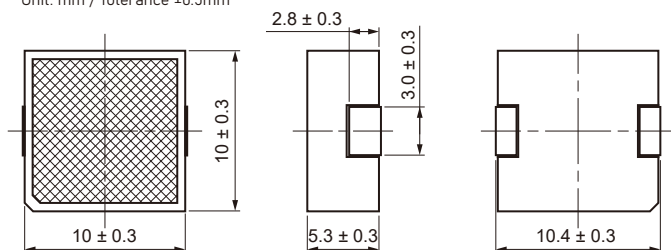


Housing	LCP
Color	Black
Terminal	SMT

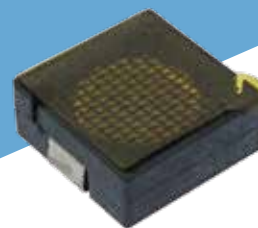
SU010SA-TR40PB

Function	Dual
Center Frequency [KHz]	40
Sensitivity For Receiver [dB]	Min. -70
Sound Pressure Level [dB]	Min. 110 [20Vp-p / 30cm]
Capacitance [pF]	2700
Input Voltage [Vp-p]	Max. 85
Operating Temperature [°C]	-30 ~ +80
Weight [g]	0.8

Dimensions [size : 10 X 10 X 5.3 mm]

Unit: mm / Tolerance $\pm 0.5\text{mm}$ 

SU010S Series

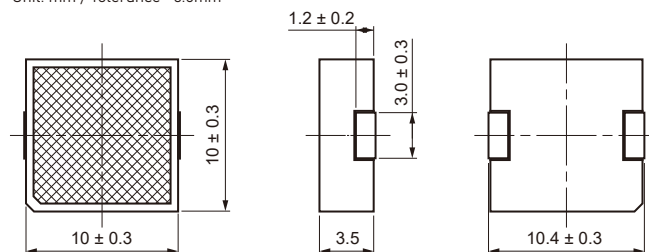


Housing	LCP
Color	Black
Terminal	SMT

SU010S-TR40PB

Function	Dual
Center Frequency [KHz]	40
Sensitivity For Receiver [dB]	Min. -75
Sound Pressure Level [dB]	Min. 105 [6Vp-p / 15cm]
Capacitance [pF]	12000
Input Voltage [Vp-p]	Max. 84
Operating Temperature [°C]	-30 ~ +80
Weight [g]	0.7

Dimensions [size : 10 X 10 X 3.5 mm]

Unit: mm / Tolerance $\pm 0.5\text{mm}$ 

U010 Series

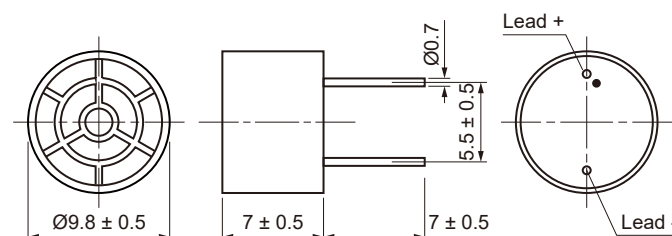


Housing	ABS
Color	Black
Terminal	Pin

U010-TR40PBP

Function	Dual
Center Frequency [KHz]	40
Sensitivity For Receiver [dB]	Min. -67
Sound Pressure Level [dB]	Min. 108 [28Vp-p / 30cm]
Capacitance [pF]	2200
Input Voltage [Vp-p]	Max. 113
Operating Temperature [°C]	-20 ~ +70
Weight [g]	0.6

Dimensions [size : Ø9.8 X 7 mm]

Unit: mm / Tolerance $\pm 0.5\text{mm}$ 

Open Structure Ultrasonic Sensor U010 Series



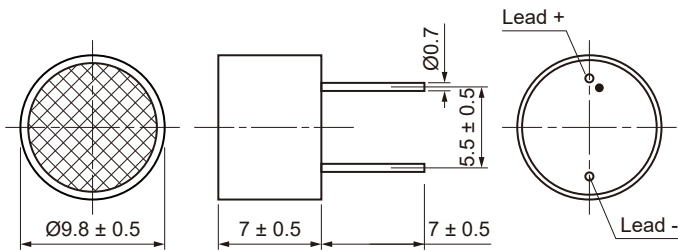
Housing
Aluminum
Color
Silver
Terminal
Pin

U010-TR40ASP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	Min. -67
Sound Pressure Level	[dB]	Min. 108 [28Vp-p / 30cm]
Capacitance	[pF]	2200
Input Voltage	[Vp-p]	Max. 113
Operating Temperature	[°C]	-20 ~ +70
Weight	[g]	0.6

Dimensions [size : Ø9.8 X 7 mm]

Unit: mm / Tolerance ±0.5mm



Open Structure Ultrasonic Sensor U012 Series



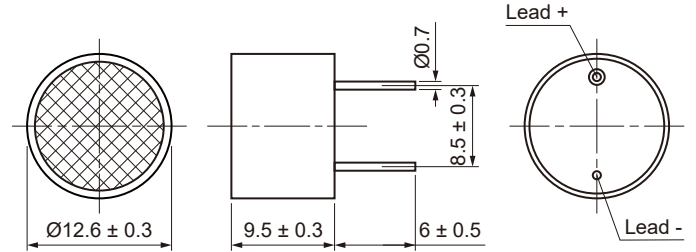
Housing
Aluminum
Color
Black
Terminal
Pin

U012-TR40ABP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	Min. -65
Sound Pressure Level	[dB]	Min. 115 [28Vp-p / 30cm]
Capacitance	[pF]	2100
Input Voltage	[Vp-p]	Max. 84
Operating Temperature	[°C]	-20 ~ +70
Weight	[g]	1.6

Dimensions [size : Ø12.6 X 9.5 mm]

Unit: mm / Tolerance ±0.5mm



Open Structure Ultrasonic Sensor U016 Series



Housing
ABS
Color
Black
Terminal
Pin

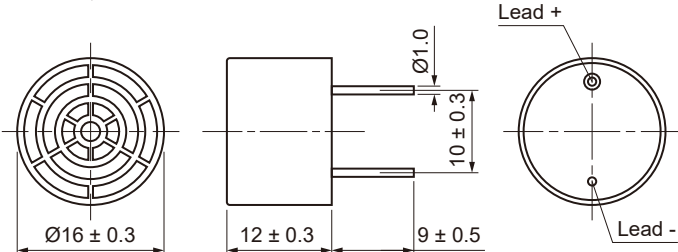
U016-T25PBP

U016-TR40PBP

Function		Transmitter	Dual
Center Frequency	[KHz]	25	40
Sensitivity For Receiver	[dB]	Nil	Min. -65
Sound Pressure Level	[dB]	Min. 110 [28Vp-p / 30cm]	Min. 115 [28Vp-p / 30cm]
Capacitance	[pF]	2500	2200
Input Voltage	[Vp-p]	Max. 56	Max. 56
Operating Temperature	[°C]	-20 ~ +70	-20 ~ +70
Weight	[g]	1.8	1.8

Dimensions [size : Ø16 X 12 mm]

Unit: mm / Tolerance ±0.5mm



Open Structure Ultrasonic Sensor U016 Series



Housing
Aluminum
Color
Silver
Terminal
Pin

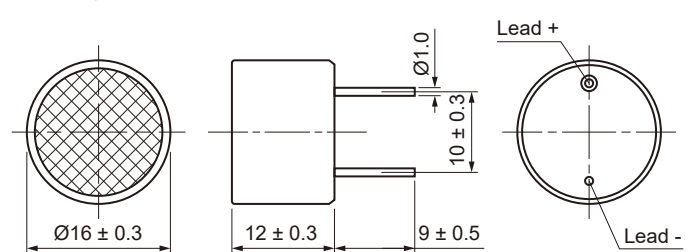
U016-T25ASP

U016-TR40ASP

Function		Transmitter	Dual
Center Frequency	[KHz]	25	40
Sensitivity For Receiver	[dB]	Nil	Min. -57
Sound Pressure Level	[dB]	Min. 110 [28Vp-p / 30cm]	Min. 123 [28Vp-p / 30cm]
Capacitance	[pF]	2500	2400
Input Voltage	[Vp-p]	Max. 56	Max. 56
Operating Temperature	[°C]	-20 ~ +70	-20 ~ +70
Weight	[g]	2.5	2.5

Dimensions [size : Ø16 X 12 mm]

Unit: mm / Tolerance ±0.5mm



Close Structure Ultrasonic Sensor

UC10

Series

IP67



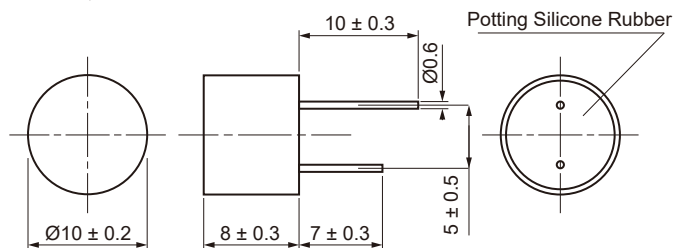
Housing
Aluminum
Color
Silver
Terminal
Pin

UC10-TR40ASP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	Min. -78
Sound Pressure Level	[dB]	Min. 100 [28Vp-p / 30cm]
Capacitance	[pF]	1800
Input Voltage	[Vp-p]	Max. 140
Operating Temperature	[°C]	-30 ~ +80
Weight	[g]	1.5

Dimensions [size : Ø10 X 8 mm]

Unit: mm / Tolerance ±0.5mm



Close Structure Ultrasonic Sensor

UC12G

Series

IP67



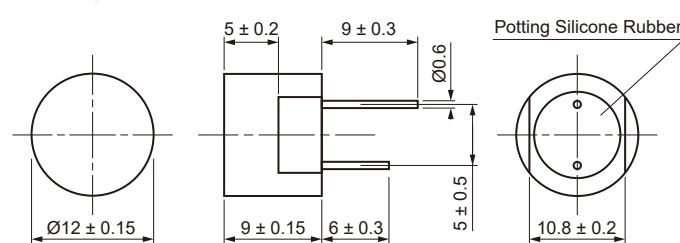
Housing
Aluminum
Color
Black
Terminal
Pin

UC12G-TR40ABP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	Min. -82
Sound Pressure Level	[dB]	Min. 100 [28Vp-p / 30cm]
Capacitance	[pF]	1800
Input Voltage	[Vp-p]	Max. 140
Operating Temperature	[°C]	-30 ~ +80
Weight	[g]	2

Dimensions [size : Ø12 X 9 mm]

Unit: mm / Tolerance ±0.5mm



Close Structure Ultrasonic Sensor

UC14L

Series

IP67



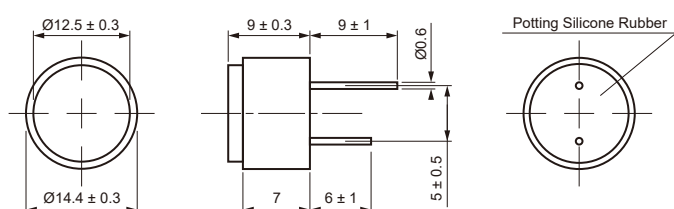
Housing
Aluminum
Color
Silver
Terminal
Pin

UC14L-TR40ASP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	Min. -74
Sound Pressure Level	[dB]	Min. 95 [28Vp-p / 30cm]
Capacitance	[pF]	1800
Input Voltage	[Vp-p]	Max. 140
Operating Temperature	[°C]	-40 ~ +80
Weight	[g]	2.5

Dimensions [size : Ø14.4 X 9 mm]

Unit: mm / Tolerance ±0.5mm



Close Structure Ultrasonic Sensor

UC16

Series

IP67



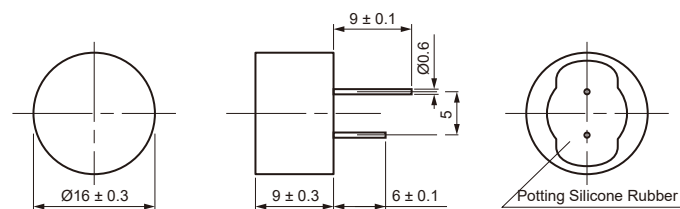
Housing
Aluminum
Color
Silver
Terminal
Pin

UC16-TR40ASP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	Min. -75
Sound Pressure Level	[dB]	Min. 100 [28Vp-p / 30cm]
Capacitance	[pF]	1800
Input Voltage	[Vp-p]	Max. 140
Operating Temperature	[°C]	-40 ~ +80
Weight	[g]	3.5

Dimensions [size : Ø16 X 9 mm]

Unit: mm / Tolerance ±0.5mm



Close Structure Ultrasonic Sensor

UC16L Series

IP67



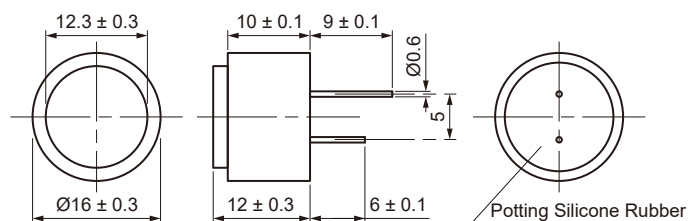
Housing
Aluminum
Color
Black
Terminal
Pin

UC16L-TR40ABP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	Min. -75
Sound Pressure Level	[dB]	Min. 95 [28Vp-p / 30cm]
Capacitance	[pF]	1800
Input Voltage	[Vp-p]	Max. 140
Operating Temperature	[°C]	-30 ~ +80
Weight	[g]	3.5

Dimensions [size : Ø16 X 12 mm]

Unit: mm / Tolerance ±0.5mm



Close Structure Ultrasonic Sensor

UC18G Series

IP67



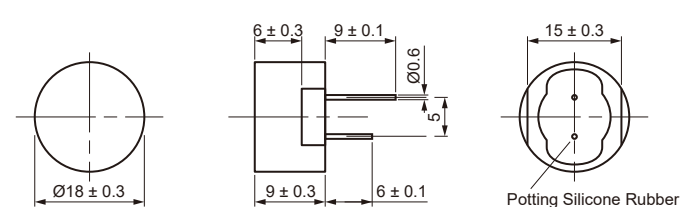
Housing
Aluminum
Color
Silver
Terminal
Pin

UC18G-TR40ASP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	Min. -80
Sound Pressure Level	[dB]	Min. 100 [28Vp-p / 30cm]
Capacitance	[pF]	1800
Input Voltage	[Vp-p]	Max. 140
Operating Temperature	[°C]	-30 ~ +80
Weight	[g]	4

Dimensions [size : Ø18 X 9 mm]

Unit: mm / Tolerance ±0.5mm



Close Structure Ultrasonic Sensor

UC180 Series

IP67



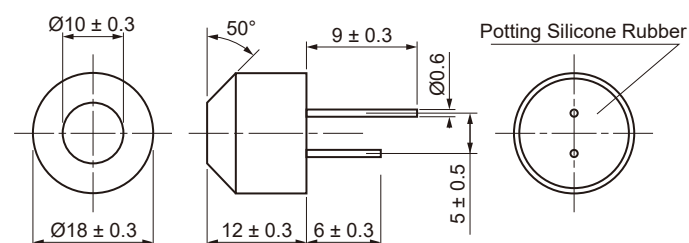
Housing
Aluminum
Color
Black
Terminal
Pin

UC180-TR40ABP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	-70
Sound Pressure Level	[dB]	Min. 100 [28Vp-p / 30cm]
Capacitance	[pF]	1800
Input Voltage	[Vp-p]	Max. 140
Operating Temperature	[°C]	-30 ~ +80
Weight	[g]	5

Dimensions [size : Ø18 X 12 mm]

Unit: mm / Tolerance ±0.5mm



Close Structure Ultrasonic Sensor

UC25 Series

IP67



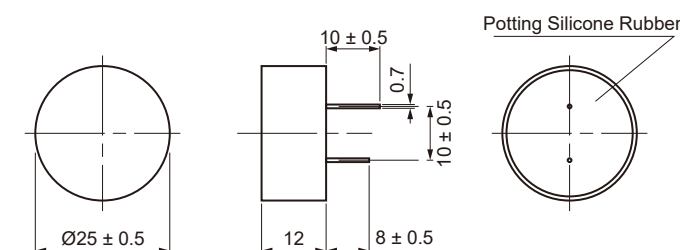
Housing
Aluminum
Color
Silver
Terminal
Pin

UC25-TR40ASP

Function		Dual
Center Frequency	[KHz]	40
Sensitivity For Receiver	[dB]	-90
Sound Pressure Level	[dB]	Min. 120 [28Vp-p / 30cm]
Capacitance	[pF]	2200
Input Voltage	[Vp-p]	Max. 160
Operating Temperature	[°C]	-20 ~ +80
Weight	[g]	8

Dimensions [size : Ø25 X 12 mm]

Unit: mm / Tolerance ±0.5mm



Ultrasonic Speaker USM38 Series

IP64



Housing

ABS

Cone

Mylar

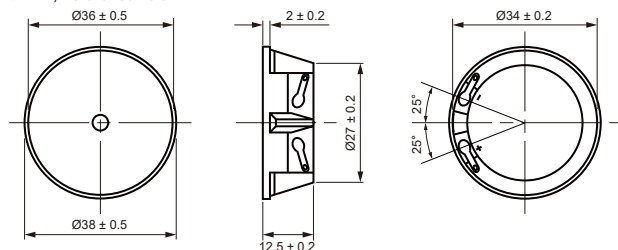
Terminal

Solder Pad

		USM38-25	USM38-40
Function		Transmitter	Transmitter
Resonant Frequency	[KHz]	25	40
Frequency Range	[KHz]	20 ~ 60	20 ~ 40
Sound Pressure Level	[dB]	Min. 90 [9Vp-p / 30cm]	Min. 100 [9Vp-p / 20cm]
Capacitance	[pF]	100000	100000
Operating Voltage	[Vp-p]	1 ~ 30	1 ~ 30
Operating Temperature	[°C]	-20 ~ +70	-20 ~ +70
Weight	[g]	4	4

Dimensions [size : Ø38 X 12.5 mm]

Unit: mm / Tolerance ±0.5mm



Ultrasonic Speaker USL41 Series



Housing

ABS

Cone

Paper

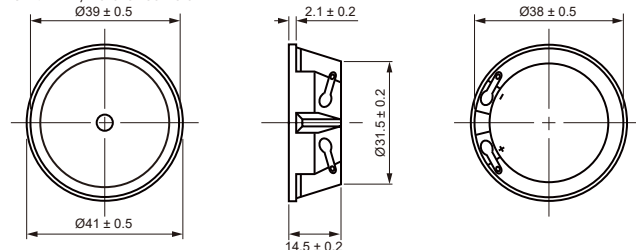
Terminal

Solder Pad

		USL41-25
Function		Transmitter
Resonant Frequency	[KHz]	25
Frequency Range	[KHz]	20 ~ 60
Sound Pressure Level	[dB]	Min. 90 [9Vp-p / 30cm]
Capacitance	[pF]	100000
Operating Voltage	[Vp-p]	1 ~ 30
Operating Temperature	[°C]	-20 ~ +70
Weight	[g]	5.5

Dimensions [size : Ø41 X 14.5 mm]

Unit: mm / Tolerance ±0.5mm



Ultrasonic Speaker USL51 Series



Housing

ABS

Cone

Paper

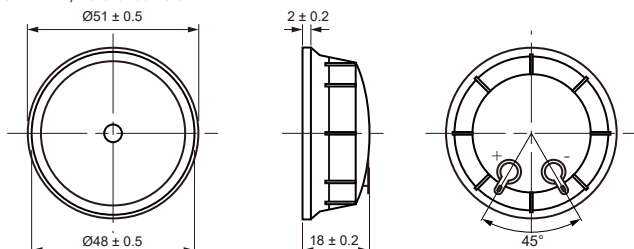
Terminal

Solder Pad

		USL51-20
Function		Transmitter
Resonant Frequency	[KHz]	20
Frequency Range	[KHz]	20 ~ 60
Sound Pressure Level	[dB]	Min. 95 [9Vp-p / 30cm]
Capacitance	[pF]	100000
Operating Voltage	[Vp-p]	1 ~ 30
Operating Temperature	[°C]	-20 ~ +70
Weight	[g]	8.5

Dimensions [size : Ø51 X 18 mm]

Unit: mm / Tolerance ±0.5mm



Ultrasonic Speaker USM51E Series

IP64



Housing

ABS

Cone

Mylar

Terminal

Solder Pad

		USM51E-20
Function		Transmitter
Resonant Frequency	[KHz]	20
Frequency Range	[KHz]	20 ~ 60
Sound Pressure Level	[dB]	Min. 95 [9Vp-p / 30cm]
Capacitance	[pF]	100000
Operating Voltage	[Vp-p]	1 ~ 30
Operating Temperature	[°C]	-20 ~ +70
Weight	[g]	10

Dimensions [size : Ø51 X 18 mm]

Unit: mm / Tolerance ±0.5mm

