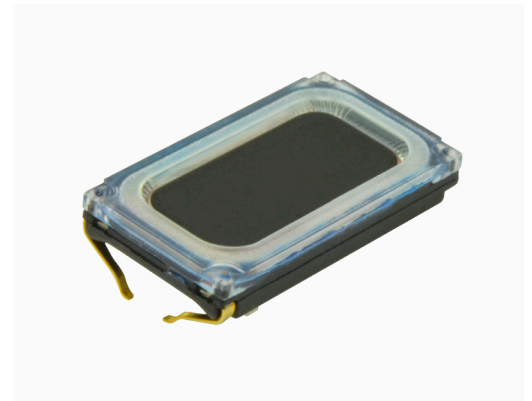


**SERIES:** CMS-16093-078X-67 | **DESCRIPTION:** SPEAKER**FEATURES**

- IP67 rated face
- protection against dust and water ingress
- micro-speaker
- 3 mm height
- 5 available termination options

**SPECIFICATIONS**

parameter	conditions/description	min	typ	max	units
input power	max power: as per IEC-268-1, in 1 cc box		0.7	1.0	W
impedance	at 2.0 kHz, 2.37 Vrms, in 1 cc box	6.8	8	9.2	$\Omega$
coil resistance		6.48	7.2	7.92	$\Omega$
resonant frequency (Fo)	at 1.0 Vrms in free air, 10 cm	440	550	660	Hz
	at 2.37 Vrms in 1 cc box, 10 cm	680	850	1,020	Hz
frequency response		100		20,000	Hz
sound pressure level	at 0.7 W, 10 cm, avg 0.8, 1.0, 1.5, 2.0 kHz, 1 cc box	88	91	94	dB
distortion	at 800~1,200 Hz, 2.37 Vrms, 10 cm			15	%
	at 1,201~5,000 Hz, 2.37 Vrms, 10 cm			10	%
buzz, rattle, etc.	must be normal at sine wave, 0.2~2 kHz, 1 cc box			2.37	Vrms
polarity	cone moves forward w/ positive dc current to "+" terminal				
dimensions	16 x 9 x 3				mm
magnet	Nd-Fe-B				
cone material	mylar				
weight			1.3		g
operating temperature		-20		50	$^{\circ}\text{C}$
storage temperature		-40		65	$^{\circ}\text{C}$
hand soldering	for maximum 3 seconds (N/A for spring contacts)			380	$^{\circ}\text{C}$
RoHS	yes				
IP level	IP67 (front side)				

Notes: 1. All specifications measured at 15~35 $^{\circ}\text{C}$ , humidity at 25~75%, under 86~106 kPa pressure, unless otherwise noted.

**PART NUMBER KEY****CMS-16093-078 XX - 67**

Base Number

Termination Options:

S = spring contacts

SP = solder pads

L100 = wire leads, no connector

L100A = wire leads with Molex housing 51021-0200

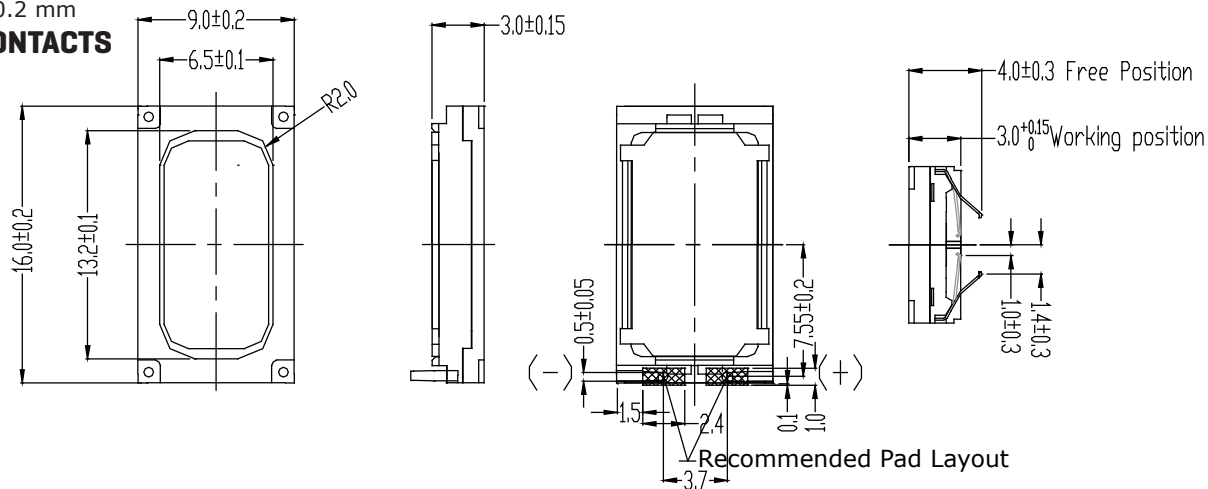
L100B = wire leads with JST housing SHR-02V-S-B

## MECHANICAL DRAWINGS

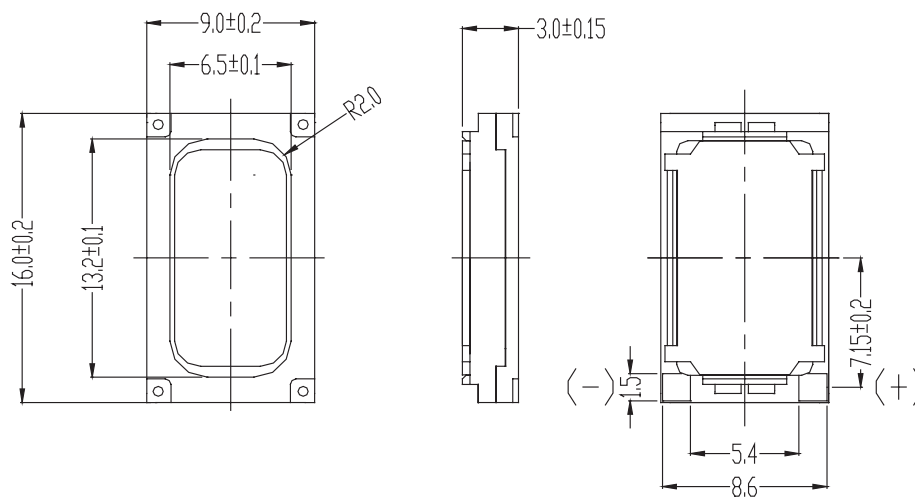
units: mm

tolerance:  $\pm 0.2$  mm

### SPRING CONTACTS



### SOLDER PADS

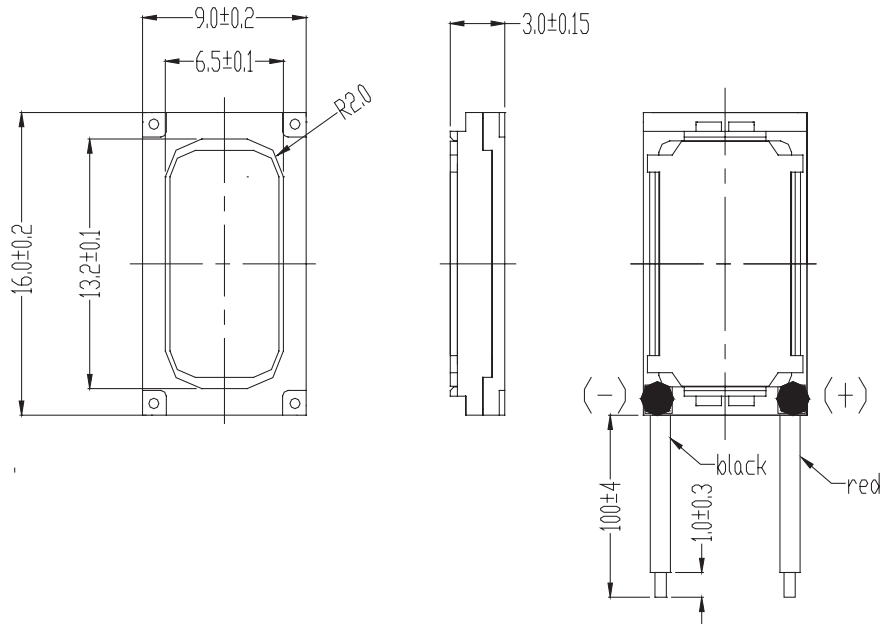


## MECHANICAL DRAWINGS (CONTINUED)

units: mm  
tolerance:  $\pm 0.2$  mm

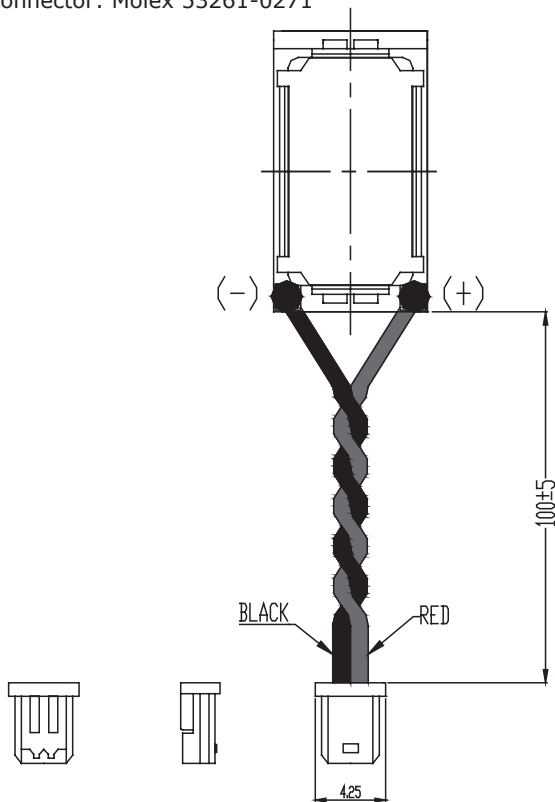
### WIRE LEADS, NO CONNECTOR

wire: UL 1571 32 AWG



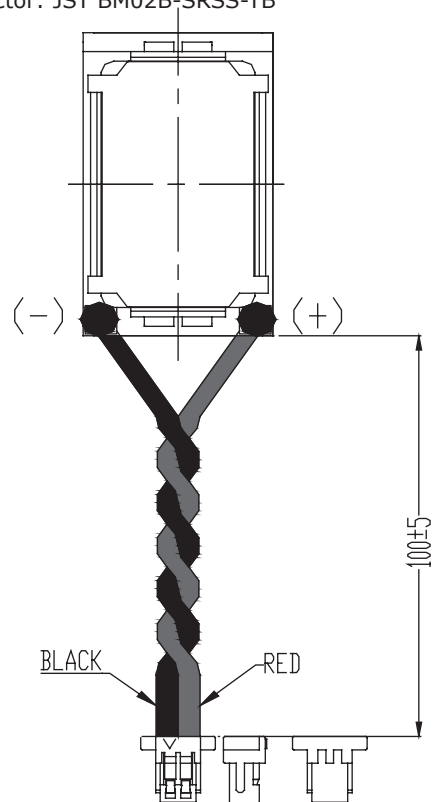
### WIRE LEADS WITH MOLEX CONNECTOR

wire: UL 1571 30 AWG  
connector: Molex 51021-0200  
mating connector: Molex 53261-0271



### WIRE LEADS WITH JST CONNECTOR

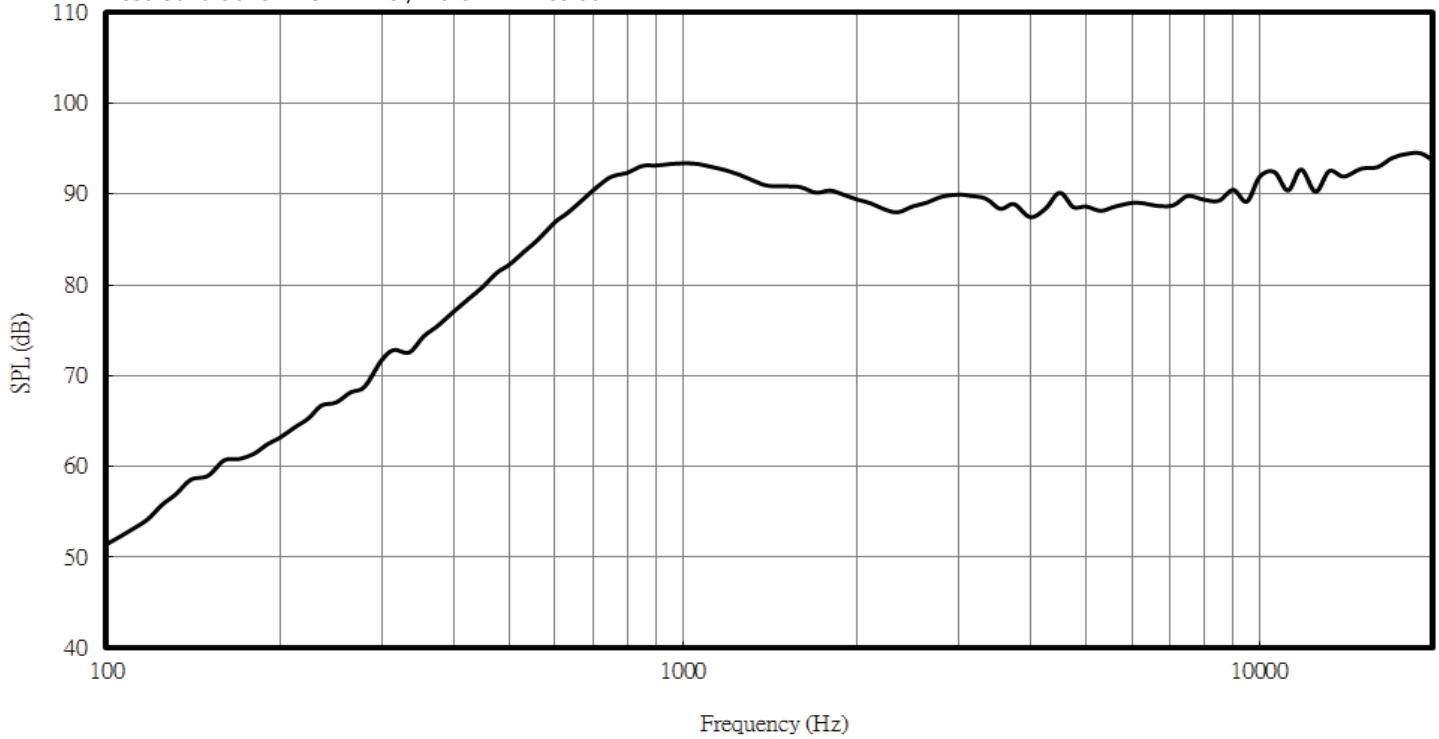
wire: UL 1571 30 AWG  
connector: JST SHR-02V-S-B  
mating connector: JST BM02B-SRSS-TB



## RESPONSE CURVES

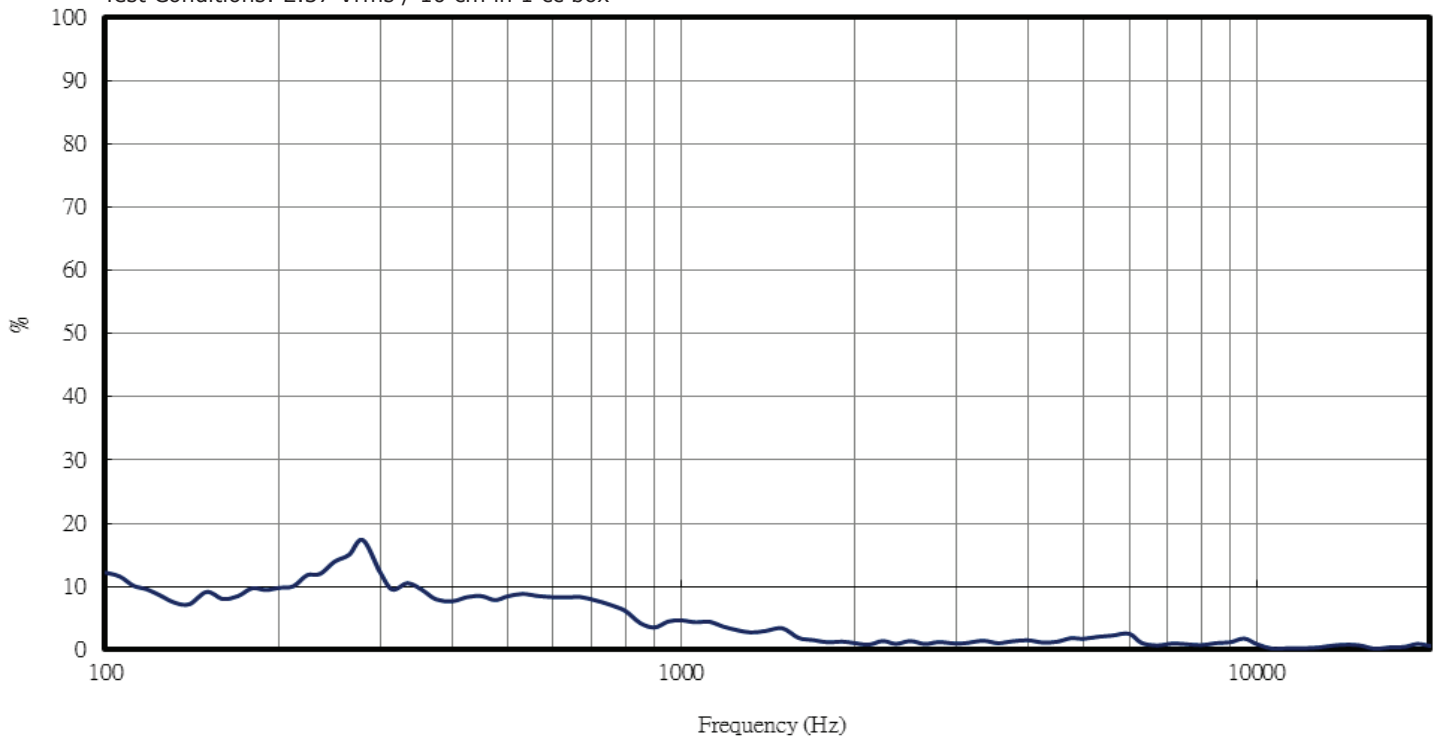
### Frequency Response Curve

Test Conditions: 2.37 Vrms / 10 cm in 1 cc box



### Total Harmonic Distortion Curve

Test Conditions: 2.37 Vrms / 10 cm in 1 cc box



## PACKAGING

units: mm

Tray Size: 290 x 215 mm  
 Tray QTY: 100 pcs per tray  
 Carton Size: 470 x 300 x 310 mm  
 Carton QTY: 5,000 pcs per carton

