



Address:
Telephone:
Fax:
Email:
Website:

Midas Sensors, Electra House, 32 Southtown Road, Great Yarmouth, Norfolk, NR31 0DU
+44 (0)1493 602602
+44 (0)1493 665111
sales@midassensors.com
www.midassensors.com

Specification

MCUSD16P40B12RO



Midas Ultrasonic Sensors Part Number System

MC US T 16 P 40 B 12 R S
1 2 3 4 5 6 7 8 9 10

- 1 = **MC:** Midas Components
- 2 = **US:** Ultrasonic Sensor **PV:** Piezo Vibration
- 3 = **T:** Transmitter **R:** Receiver **D:** Dual
- 4 = **Diameter** (e.g. 16 = 16mm)
- 5 = **P:** Plastic **A:** Aluminium
- 6 = **Frequency** (e.g. 40 = 40KHz)
- 7 = **B:** Black **S:** Silver
- 8 = **Height** (e.g. 12 = 12mm)
- 9 = **RoHS**
- 10 = **O:** Open **S:** Splash Proof



1.Applications

Burglar alarms 、 Range finders 、 Automatic doors 、 Remote control.

2.Features

- 2.1) Open struct and Dual use
- 2.2) Compact and light weight.
- 2.3) High sensitivity and sound pressure.
- 2.4) Less power consumption.
- 2.5) High reliability



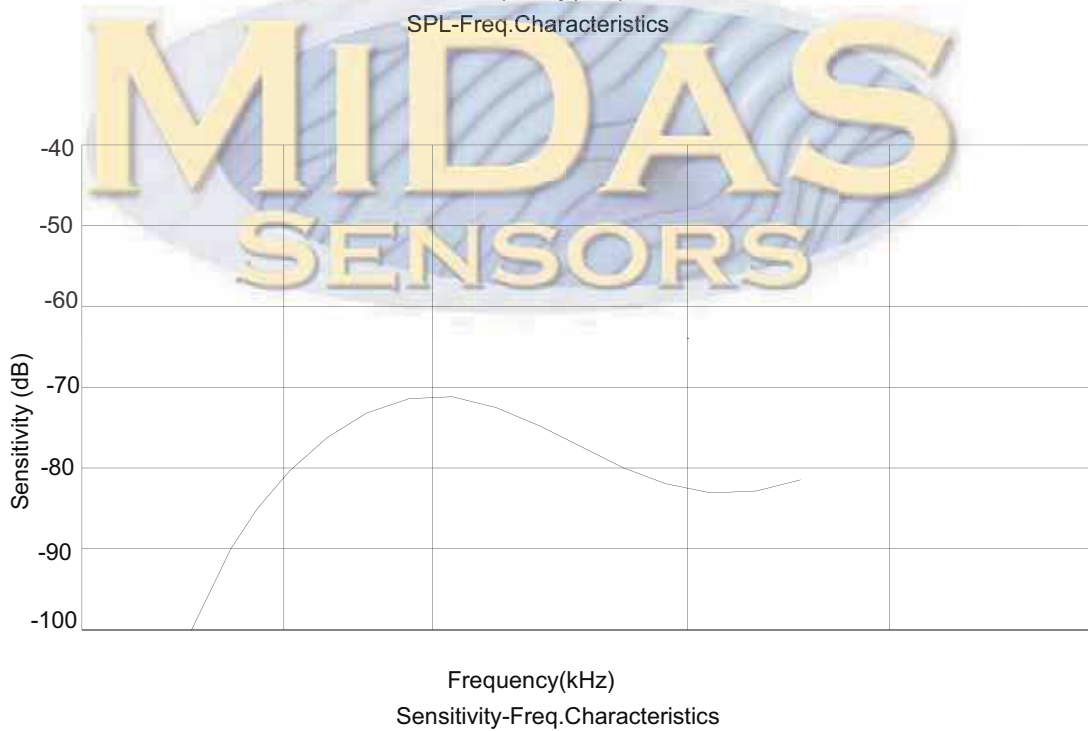
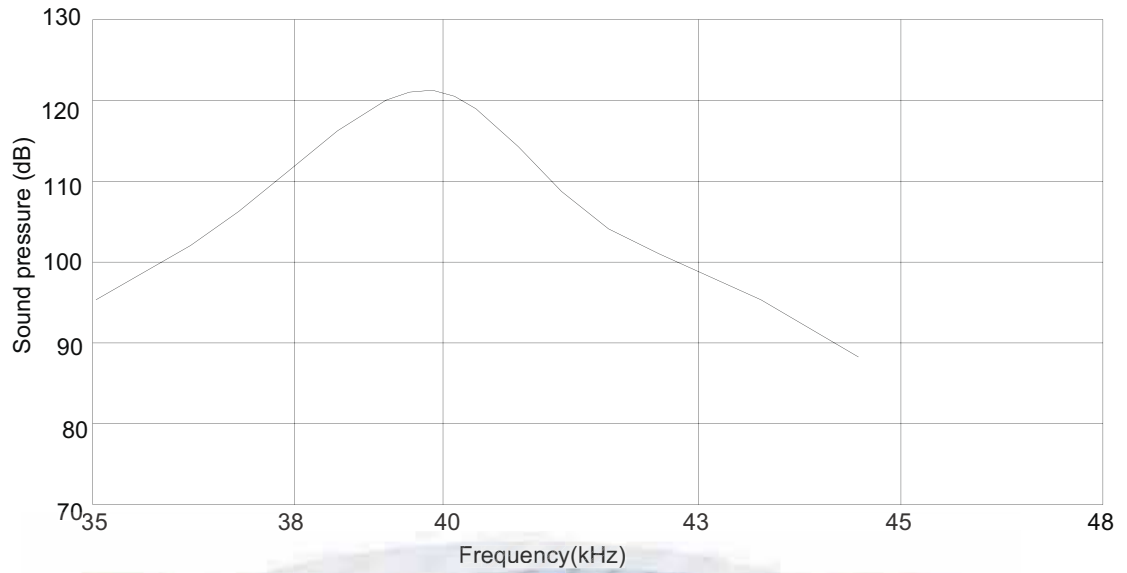
3.Technical terms

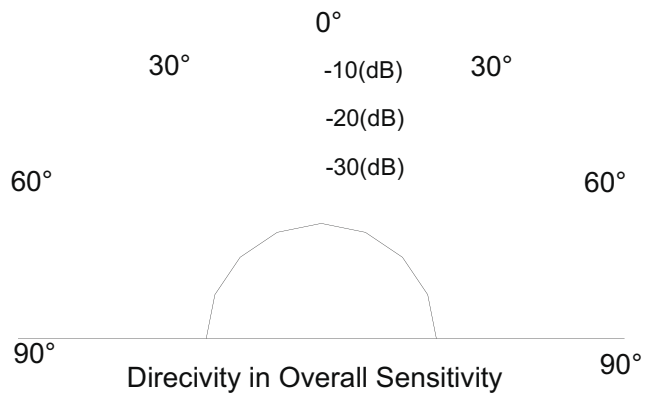
No.	Item	Specification
1.	Construction	Open Struct
2.	Using Method	Dual Use
3.	Frequency	40 ± 1kHz
4.	Transmitting Sound Pressure Level	min.112dB(30cm/10Vrms Sine Wave)
5.	Receive Sensitive	min.-74dBV/ μ bar
6.	-6dB Directivity	50deg
7.	Afterschok Time	max.1.5ms
8.	Sensitivity Distance	0.6~16m
9.	Capacitance	3000pF 20% at1KHz
10.	Soldering conditions	350 to 400 C
11.	Operating Tem.Range	-30 to 85 C
12.	Allowable Input Voltage	120Vp-p(40KHz)
13.	Housing Material	Plastic

4. Drawing

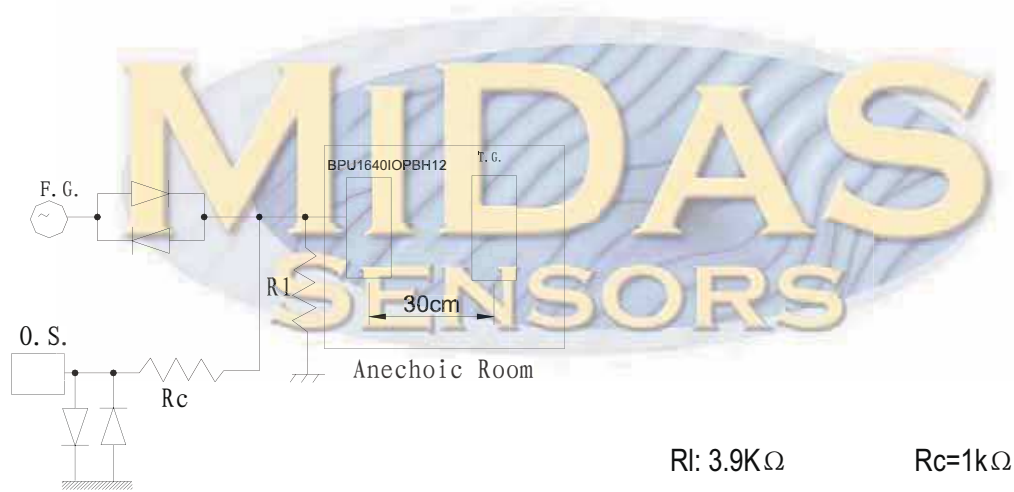


5. Beam Pattern





6. Test circuit



T.G. :Target
F.G. :Function Generator
O.S. :Oscilloscope

7. Reliability Test

7.1	High temp.life test		
	Temperature	+85	C
	Duration	72	hrs
7.2	Low temp.life test		
	Temperature	-30	C
	Duration	72	hrs
7.3	Heat Cycle Test		
	Temperature	-30	+85
	Temperature variational rate	3	C/min
	Cycles	12	cycles
7.4	Humidity Test		
	Temperature	+65	C
	Relative Humidity	90~95	%
	Duration	72	hrs

Tests above should be measured after leaving normal temperature for 24hrs.

7.5	Vibration Test		
	Vibration Frequency	25	Hz
	Acceleration	43.12	m/s ²
	Direction	x	
	Time	15	min
*7.6	Life test in normal temperature(25 C reference)		
	Power supply	150Vp-p	(40KHz ,square wave)
	Duration	48	hours
7.7	Drop test		
	Height	1	m
	(Dropped to 20mm thick hardwood board without packing.)		
	Times	10	times

Notice:

The variation of the S.P.L at 40KHz is within 3dB compared with initial figures at 25 C after above test condition