

DETAILED SPECIFICATION FOR QCM SENSOR PART # QCM5140AgAl133-060-B1

KEY FEATURES

- ☑ 5 MHz
- ☑ 14.0 MM SENSOR DIAMETER
- ☑ 13.3 / 6.0 MM ELECTRODE DIAMETER
- ☑ SILVER / ALUMINUM ELECTRODES
- ☑ BALZER TEST JIG COMPATIBLE
- ☑ 100% TESTED ELECTRICALLY AND VISUALLY
- ☑ SPUTTERED ELECTRODES

DESCRIPTION

For use in film thickness monitors. Very reliable function due to good adhesion of electrodes. Long operational life time. One sided circumference contact back side electrode.

GENERAL

Item	Parameter	Value
1.0	Sensor design	Plano-Convex
2.0	Angle of cut	AT
3.0	Jig compability	Balzer

ELECTRICAL

4.1	Nominal frequency	5.000 MHz
4.2	Center frequency	4.967 MHz
4.3	Frequency tolerance	+/- 7 KHz
4.4	Q-value	> 150 000
4.5	Shunt capacitance, C0	Typ. 10 pF

ELECTRODES

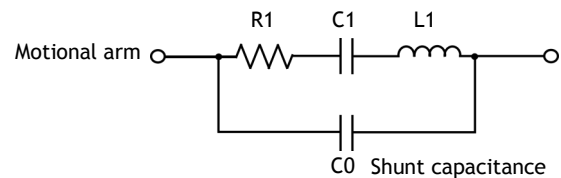
5.1	Front electrode diameter	13.3 mm
5.2	Front electrode material	Ag/Al, Silver / Aluminium
5.3	Back electrode diameter	6.0 mm
5.4	Back electrode material	Ag/Al, Silver / Aluminium
5.5	One sided contacting	No

MECHANICAL & DRAWING

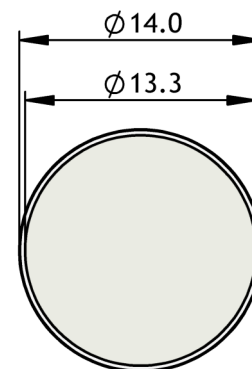
6.1	Nominal blank diameter	14.0 mm
6.2	Crystal axes orientation	No
6.3	Surface appearance	Matte
6.4	Bevel	No



Quartz Crystal
Electrical equivalent 2pole

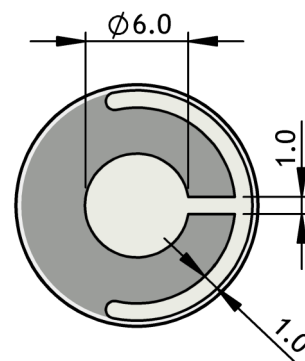


Front electrode



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Back electrode



DETAILED SPECIFICATION FOR QCM SENSOR PART # QCM5140AgAl133-060-B1

MARKING / LABEL

7.1	QR code	Simple info readout with QR app
7.2	Part Number	QCM5140AgAl133-060-B1
7.3	Nom. Frequency	5.000 MHz
7.4	Sensor diameter	14.0 mm
7.5	Electrode material	Ag/Al, Silver / Aluminium



PACKAGING & STORAGE

8.1	Sensor package type	Revolving plastic depository with a transparent lid for easy inspection
8.2	Storage quantity	10 covered dust and shock protected storage positions and 1 open position for ejection
8.3	Package protection	Package is protected with a vacuum sealed plastic bag for prolonged storage and shipping
8.4	Storage recommendation	After opening plastic vacuum bag preferably store in dust free dry Air or Nitrogen @ room temperature.
8.5	Cleaning	No cleaning necessary before use. However after prolonged storage in humid air a light cleaning in a ultrasonic bath of either ultraclean water or alcohol without any denaturation can be done to remove adsorbed molecules on the surfaces

REVISION HISTORY

	Date	Description
9.0	2009.02.06	First issue
9.1	2014.08.15	New detailed datasheet
9.2		
9.3		
9.4		
9.5		

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PRODUCT PART NUMBER DESIGNATION AND INTERPRETATION. FOR MORE ALTERNATIVES SEE PAGE 3

Item	Product Category	1. Nominal Frequency	2. Sensor Diameter	3a. Coating Multiple layer 3b. Coating Single layer	4. Electrode Diameter Ø Front-Back	5. Jig/Holder Compability
Parameter	QCM	5 MHz	14.0	Silver / Aluminium	13.3-6.0mm	Balzer
Code	QCM	5	140	AgAl	133-060	B

Part number designation : QCM5140AgAl133-060-B1

PART NUMBER DESIGNATION OPTIONS (AVAILABLE TYPES)

1. Nom Frequency	Designation	2. Sensor Diameter Ø	Designation	3a. Coating -Multiple layer	Designation
5.00 MHz	5	8.90 mm	089	Chromium/Gold	CrAu
6.00 MHz	6	12.45 mm	125	Silver/Aluminum	AgAl
9.00 MHz	9	14.0 mm	140	Nickel/Silver	NiAg
10.7 MHz	10	25.4 mm	254	Titanium/Gold	TiAu
				Chromium/Gold/SiO2	CrAuSiO2
				Nickel/Silver	NiAg

4. Electrode Diameter Ø Front-Back	Designation	5. Jig/Holder Compability	Designation	3b. Coating -Single layer	Designation
5.1-5.1mm	051-051	Balzer	B	Gold	Au
5.4-5.4 mm	054-054	Sloan/Ulvac	S	Silver	Ag
7.5-5.0mm	075-050	Inficon*	I	Copper	Cu
7.5-7.5mm	075-075	Q Sense	Q	Titanium	Ti
11.5-11.5 mm	115-115	Maxtek 25.4mm	M	Aluminum	Al
12.0-5.0mm	120-050	HC-50	H		
12.8-6.4 mm	128-064	Custom	C		
13.0-6.4 mm	130-064				
13.0-13.0mm	130-130				
13.3-6.0mm	133-060				

* also compatible with Maxtek, Sycon, Sigma ,Intellimetrics, Fil-Tech, Phelps

Custom made products: In case you need something else that is not listed above, please feel free to ask and we will check our possibilities. Use our contact form under Contact. www.quartzpro.com

