

## AN518 Min/Max values for the MS5541-C

### LIMITS FOR COEFFICIENTS AND FOR THE CALCULATED RESULTS OF MS5541-C

Assumed pressure and temperature range: 0...14 bar, -40...85 °C.  
For definitions, see data sheet of MS5541-C.

#### MAXIMUM VALUES FOR C1-C6

	min	typ	max
C1 (13 bit)	0	2391	8191
C2 (13 bit)	0	4888	8191
C3 (10 bit)	0	385	1023
C4 (9 bit)	0	221	511
C5 (12 bit)	0	1689	4095
C6 (7 bit)	0	58	127

#### MAXIMUM VALUES FOR D1, D2

	min	typ	max
D1	0	17000	40000
D2	0	27000	45000



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### MAXIMUM VALUES FOR CALCULATION RESULTS

Pmin = 0 mbar      Pmax = 14 bar  
Tmin = -40 °C      Tmax = +85 °C      Tref = +20 °C

	min	typ	max
UT1=8*C5+10000	10000	28016	42760
dUT=D2-UT1	-11400	0	12350

dTmin = (Tmin -Tref)\*190TLSB/°C

dTmax = (Tmax-Tref)\*190TLSB/°C

OFF=C2+10000+(C4-250)*dUT/2^12	9246	14888	18887
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OFFmin =C2min +10000+(C4min -250)\*dTmax/2^12

OFFmax=C2max+10000+(C4max-250)\*dTmin /2^12

SENS=C1/2+(C3+200)*dUT/2^13+3000	1298	4196	8939
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Sensmin =C1min /2+(C3max+200)\*dTmin /2^13+3000

Sensmax=C1max/2+(C3max+200)\*dTmax/2^13+3000

P (0...14 bar, with 1 mbar resolution)	0		14000
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TEMP=200+dT*(C6+100)/2^11 (-40...85 °C, with 0.1 °C resolution, in 0.1 °C units)	-400		850
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### REVISION HISTORY

Date	Revision	Type of changes
23.04.2008	01	Initial document
27.01.2010	02	Change to MEAS layout
17.08.2011	03	Insertion of the logo MEAS TM. Modification of the Shenzhen ZIP code to 518057. Modification of the north America contact to Fremont, modification of the Europe company legal entity to Sàrl and correction of the Europe email and website addresses. Modification of the document number from 0005541C1732 to applicno1732.

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