

PERFORMANCE SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Conditions	Min.	Typ.	Max	Unit
Supply voltage	V_{DD}		-0.3		+3.6	V
Storage temperature	T_S		-20		+85	°C
Overpressure	P_{max}				5	bar
Maximum Soldering Temperature	T_{max}	40 sec max			250	°C
ESD rating		Human Body Model	-2		+2	kV
Latch up		JEDEC standard No 78	-100		+100	mA

ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Conditions	Min.	Typ.	Max	Unit
Operating Supply voltage	V_{DD}		1.8	3.0	3.6	V
Operating Temperature	T		-40	+25	+85	°C
Supply current (1 sample per sec.)	I_{DD}	OSR 8192 4096 2048 1024 512 256		20.09 10.05 5.02 2.51 1.26 0.63		μ A
Peak supply current		during conversion		1.25		mA
Standby supply current		at 25°C ($V_{DD} = 3.0$ V)		0.01	0.1	μ A
VDD Capacitor		From VDD to GND	100	470		nF

ANALOG DIGITAL CONVERTER (ADC)

Parameter	Symbol	Conditions	Min.	Typ.	Max	Unit
Output Word				24		bit
Conversion time	t_c	OSR 8192 4096 2048 1024 512 256		16.44 8.22 4.13 2.08 1.06 0.54		ms

PERFORMANCE SPECIFICATIONS (CONTINUED)

PRESSURE OUTPUT CHARACTERISTICS ($V_{DD} = 3\text{ V}$, $T = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

Parameter	Conditions		Min.	Typ.	Max	Unit
Operating Pressure Range	P_{range}	Full Accuracy	300		1200	mbar
Extended Pressure Range	P_{ext}	Linear Range of ADC	10		2000	mbar
Absolute Accuracy, no autozero	at 25°C , 750..1100 mbar		-2		+2	mbar
Absolute Accuracy, autozero at one pressure point	300..1200 mbar at 25°C 300..1200 mbar, $-20..85^\circ\text{C}$		-2 -4		+2 +4	mbar
Maximum error with supply voltage	$V_{DD} = 1.8\text{ V} \dots 3.6\text{ V}$			± 2.5		mbar
Long-term stability				± 1		mbar/yr
Resolution RMS	OSR	8192		0.02		mbar
		4096		0.03		
		2048		0.06		
		1024		0.11		
		512		0.19		
		256		0.35		
Reflow soldering impact	IPC/JEDEC J-STD-020C (See application note AN808 on http://meas-spec.com)			-1.5		mbar
Recovering time after reflow (1)				5		days

(1) Time to recover at least 66% of the reflow impact.

TEMPERATURE OUTPUT CHARACTERISTICS ($V_{DD} = 3\text{ V}$, $T = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

Parameter	Conditions		Min.	Typ.	Max	Unit
Absolute Accuracy	at 25°C $-20..85^\circ\text{C}$		-1 -2		+1 +2	$^\circ\text{C}$
Maximum error with supply voltage	$V_{DD} = 1.8\text{ V} \dots 3.6\text{ V}$			± 0.3		$^\circ\text{C}$
Resolution RMS (to confirm with measured values)	OSR	8192		0.002		$^\circ\text{C}$
		4096		0.003		
		2048		0.004		
		1024		0.006		
		512		0.009		
		256		0.012		