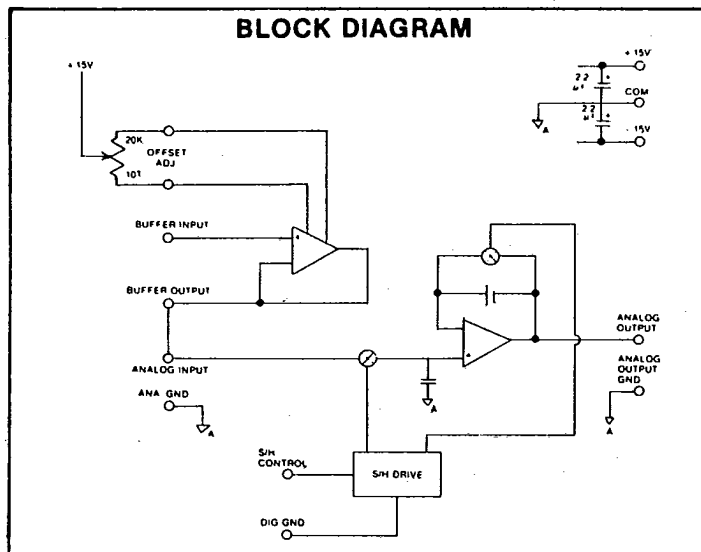
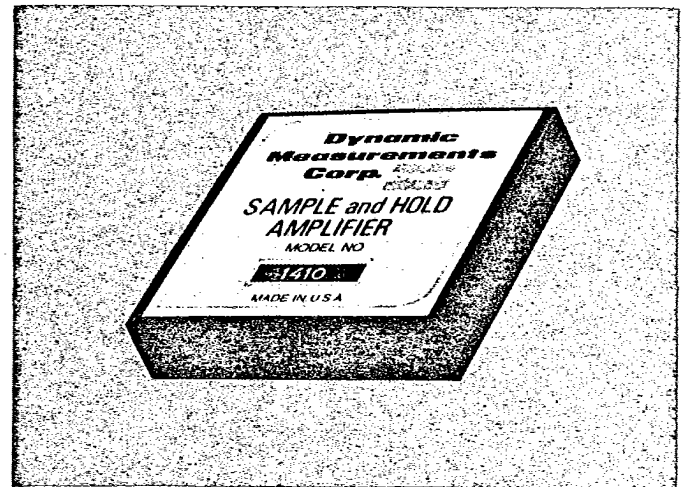




SAMPLE AND HOLD AMPLIFIERS

VERY HIGH SPEED MODELS 1410 — 1411

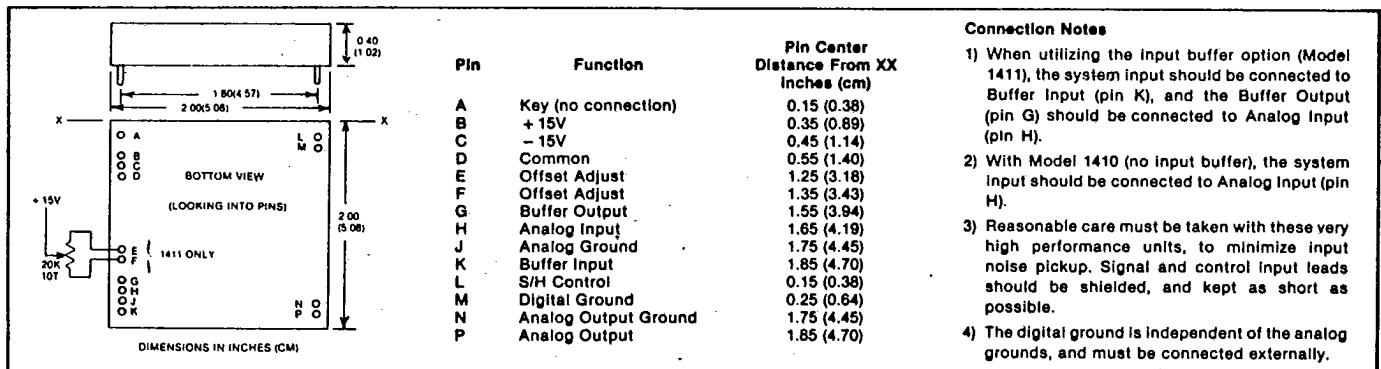
- LOW ACQUISITION TIME
200nS max ... 0.1% accuracy
350nS max ... 0.01% accuracy
- EXCELLENT LINEARITY
Within $\pm 0.003\%$ max overall.
- OPTIONAL INPUT BUFFERING
Model 1410 ... unbuffered
Model 1411 ... buffered input
- FAST SETTLING
100nS max to 0.01% F.S. (sample $\rightarrow$ hold)
- LOW APERTURE UNCERTAINTY
100pS max
- MILITARY VERSIONS AVAILABLE
... Consult factory



This design can easily exploit the speed capabilities of even the highest performance ADC's, such as DMC's 2850 series.

The specified linearity (within $\pm 0.003\%$ max) includes all error sources, such as sample mode non-linearity and pedestal off-set variation.

The system is available with an input buffer, as Model 1411, to provide high impedance and to ease drive requirements.



Dynamic Measurements Corp.

(617) 729-7870

8 Lowell Avenue, Winchester, Massachusetts 01890

Cable: DYMECO

TWX (710) 348-6596

In the U.S.A. call DMC toll-free (800) 225-1151

OPERATING CHARACTERISTICS

(Typical and nominal at 25°C, unless otherwise noted)

ACCURACY	Non-linearity, overall including pedestal offset deviation Gain Dielectric absorption coefficient	$\pm 0.003\%$ max 0.9999 min, 1.0000 max 1.5×10^{-4}
SAMPLE MODE	Input Signal Voltage Absolute Max Rating Small Signal Bandwidth Full Power Bandwidth Slew Rate Input Impedance Settling Time To 0.01% for 10V step input To 0.1% for 10V step input Input Bias Current Noise Input Offset Voltage Offset Voltage vs Supply Offset Voltage T.C.	$\pm 10V$ DC $\pm V_{CC}$ 8MHz typ 1MHz min 80V/ μ S min, 100V/ μ S typ 50 ohms into 200pF II10 ⁹ ohms 10 ⁹ ohms 1410 600nS max 350nS max 40nA max 0.1mV pp max @ 1MHz BW $\pm 2mV$ max. 1411 has zero adjust 500uV/% typ 100uV/°C max 1411 650nS max 400nS max
SAMPLE TO HOLD SWITCHING	Transient Settling to $\pm 0.01\%$ Aperture Delay Aperture Jitter (aperture uncertainty)	100nS max 10nS $\pm 100pS$ max
HOLD MODE	Output Voltage Output Current Output Impedance Drop Rate (doubles every 10°C) Hold Offset (pedestal) Feedthrough Rejection ($\pm 10V$ sine wave @ 100 KHz)	$\pm 10V$ min $\pm 20mA$ min 0.1 ohm max 10uV/ μ S max 10mV max 75dB min, 80dB typ
HOLD TO SAMPLE SWITCHING	Acquisition Time to 0.1% for 20V input step to 0.1% for 10V input step to 0.01% for 20V input step to 0.01% for 10V input step	1410* 150nS max 75nS max 200nS max 100nS max 1411 200nS max 200nS max 350nS max 350nS max *When 1410 is driven by a near zero-impedance source
DIGITAL CONTROL INPUT	Type Sample Hold	TTL compatible, 2 logic loads Logic "1" Logic "0"
POWER REQUIREMENTS	+15V $\pm 3\%$ -15V $\pm 3\%$ Absolute Maximum Voltage Rating	25mA max (plus load current) 25mA max (plus load current) $\pm 18V$
ENVIRONMENTAL	Warm-up Time Operating Temperature Relative Humidity Storage Temperature	3 Minutes min Full ratings (0 to +70°C), 50% derating (-25°C to +85°C) 0 to 95% non-condensing -55°C to +85°C
MECHANICAL	Module Size Weight	2" x 2" x 0.4" 42 grams

DMC Mating Socket is Model 6524 (2 req'd.)

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