

Low-Voltage, CMOS Analog Multiplexers/Switches

ELECTRICAL CHARACTERISTICS—Dual Supplies (continued)

(V+ = +4.5V to +5.5V, V- = -4.5V to -5.5V, TA = TMIN to TMAX, unless otherwise noted. Typical values are at TA = +25°C.)

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP (Note 2)	MAX	UNITS
DIGITAL I/O						
ADD, INH Input Logic Threshold High	VIH	C, E, M	2.4			V
ADD, INH Input Logic Threshold Low	VIL	C, E, M			0.8	V
ADD, INH Input Current Logic High or Low	I _{IH} , I _{IL}	V _{ADD} , V _{INH} = V+, 0V	-1	0.03	1	μA
SWITCH DYNAMIC CHARACTERISTICS						
Turn-On Time (Note 6)	t _{ON}	Figure 3	TA = +25°C C, E, M	50 225	175	ns
Turn-Off Time (Note 6)	t _{OFF}	Figure 3	TA = +25°C C, E, M	40 200	150	ns
Transition Time	t _{TRANS}	Figure 2	TA = +25°C	75	250	ns
Break-Before-Make Delay	t _{OPEN}	Figure 4	TA = +25°C	2	10	ns
Charge Injection (Note 6)	Q	CL = 1nF, RS = 0Ω, VNO = 0V, Figure 5	TA = +25°C	2	10	pC
NO Off-Capacitance	C _{NO(OFF)}	VNO = GND, f = 1MHz, Figure 7	TA = +25°C	2		pF
COM Off-Capacitance	C _{COM(OFF)}	VCOM = GND, f = 1MHz, Figure 7	TA = +25°C	2		pF
Switch On-Capacitance	C _(ON)	VCOM = VNO = GND, f = 1MHz, Figure 7	TA = +25°C	8		pF
Off-Isolation	V _{ISO}	CL = 15pF, RL = 50Ω, f = 100kHz, VNO = 1VRMS, Figure 6	TA = +25°C	<-90		dB
Channel-to-Channel Crosstalk	V _{CT}	CL = 15pF, RL = 50Ω, f = 100kHz, VNO = 1VRMS, Figure 6	TA = +25°C	<-90		dB
POWER SUPPLY						
Power-Supply Range	V+, V-	C, E, M	±2.7		±8	V
V+ Supply Current	I+	INH = ADD = 0V or V+	TA = +25°C C, E, M	-1 0.1	1 10	μA
V- Supply Current	I-	INH = ADD = 0V or V+	TA = +25°C C, E, M	-1 -10	1	μA

Note 2: The algebraic convention is used in this data sheet; the most negative value is shown in the minimum column.

Note 3: ΔRON = RON(MAX) - RON(MIN).

Note 4: Flatness is defined as the difference between the maximum and minimum value of on-resistance as measured over the specified analog signal ranges; i.e., VNO = 3V to 0V and 0V to -3V.

Note 5: Leakage parameters are 100% tested at maximum-rated hot operating temperature, and guaranteed by correlation at TA = +25°C.

Note 6: Guaranteed by design, not production tested.