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NTE7110
Integrated Circuit
3 Channel Analog Switch

Description:

The NTE7110 is an integrated circuit in a 16–Lead DIP type package designed for use as an electronic switch in VCR and audio signal processing applications. This device contains three channel two input switch circuits with each switch being controlled independently.

Features:

- Low Offset Voltage at Output: 5mV Typ
- Low Switching Noise
- Wide Dynamic Range
- Wide Frequency Range: 40MHz Typ
- Low Crosstalk
- High Speed Response: 0.2µs Typ
- Low Power Consumption

Absolute Maximum Ratings:

Supply Voltage, V_{CC} 14V
Power Dissipation, P_D 1000mw
Derate Above 25°C . . . . . 10mW/°C
Operating Temperature Range, T_{opr} . . . . . –20° to +75°C
Storage Temperature Range, T_{stg} . . . . . –40° to +125°C

Recommended Operating Condition:

Supply Voltage Range, V_{CC} . . . . . 4.5V to 13V

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_{CC1}	V_{CC} = 9V	5.2	7.1	9.0	mA
	I_{CC2}	V_{CC} = 5V	2.4	3.4	4.4	mA
Voltage Gain	G_{V1}	f = 1MHz, V_{in} = 0.5$V_{P–P}$	–0.6	–0.1	0.4	dB
	G_{V2}	f = 10MHz, V_{in} = 0.5$V_{P–P}$	–0.6	–0.1	0.4	dB

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
2nd Harmonic Distortion	HD	f = 5MHz, V_{in} = 4.5V_{P-P}, R_L = 2kΩ	–	–60	–50	dB
Switch Crosstalk	CT_{sw}	f = 5MHz, V_{in} = 0.5V_{P-P}	–	–70	–60	dB
Channel Crosstalk	CT_{ch}	f = 5MHz, V_{in} = 0.5V_{P-P}	–	–70	–60	dB
Output DC Offset Voltage	V_{OS}		–10	0	+10	mV
Switch Threshold Voltage	V_{th1}	V_{CC} = 5V	1.3	–	2.3	V
	V_{th2}	V_{CC} = 9V	1.7	–	2.7	V
	V_{th3}	V_{CC} = 12V	2.0	–	3.0	V
Input Impedance	Z_{in}		–	20	–	kΩ

Pin Connection Diagram



