No.1054B

LA7019

Monolithic Linear IC

Electronic Switch for Use in VTR Applications

Features

- Wide input dynamic range
- Low distortion
- Good frequency characteristic

Maximum Ratings at Ta = 25°C

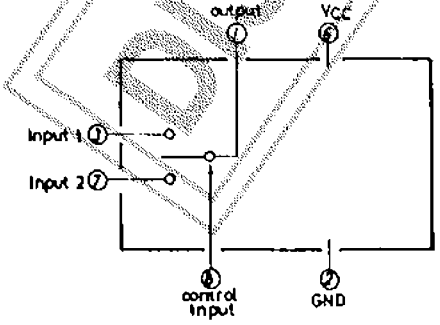
				unit
Maximum Supply Voltage	V_{CC} max		15	V
Allowable Power Dissipation	Pd max	Ta ≦ 65°C	300	mW
Operating Temperature	Topg		−20 to +65	°C
Storage Temperature	Tstg		−40 to +125	°C

Operating Characteristics at Ta = 25°C, V_{CC} = 12V

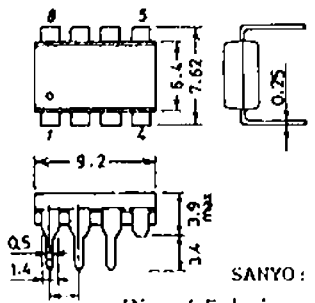
			min	typ	max	unit
Circuit Current	I_D			9.3	12.5	mA
Total Harmonic Distortion	THD	*Rg = 600Ω, 4.5Vp-p, f = 1kHz, R_L = ∞		0.007	0.1	%
Noise	e_n	*Rg = 600Ω, f = 20Hz to 20kHz, R_L = ∞		−93	−80	dBs
Crosstalk	I_{sl}	*Input A : Rg = 50Ω, f = 3.58MHz 2Vp-p, Input B : Rg = 1kΩ	46	60		dB
Pedestal	ΔVped	V_8 = 2.2 to 3.0V	−100	0	+100	mV
Second Harmonic		Rg = 50Ω, f = 1MHz, 4.0Vp-p, R_L = ∞	46	55		dB
Third Harmonic		Rg = 50Ω, f = 1MHz, 4.0Vp-p, R_L = ∞	46	52		dB
Control Threshold Voltage	V_{8S}		2.2	2.6	3.0	V
Pin Voltage (pin 1)	V_1			6.9		V
Pin Voltage (pin 3)	V_3	V_8 = 2.0V		7.6		V
Pin Voltage (pin 3)	V_3	V_8 = 3.0V		7.6		V
Pin Voltage (pin 7)	V_7	V_8 = 3.0V		7.6		V
Pin Voltage (pin 7)	V_7	V_8 = 2.2V		7.6		V

Note) * : Test for input 1 and input 2.
For input 1 test, Vcont (pin 8 voltage) is 2.0V.
For input 2 test, Vcont is 3.0V.

Equivalent Circuit Block Diagram



Case Outline 3030A-D8C2IC
(unit : mm)



Pins 4,5, being not used, are cut.

Specifications and information herein are subject to change without notice.

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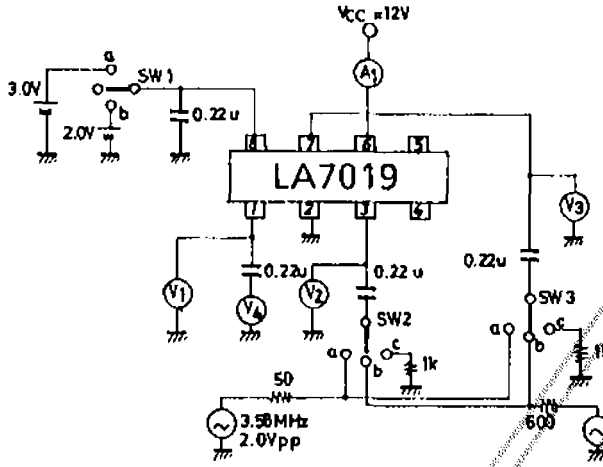
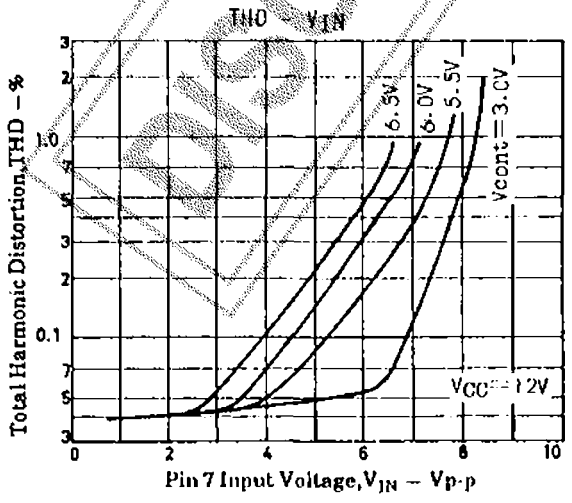
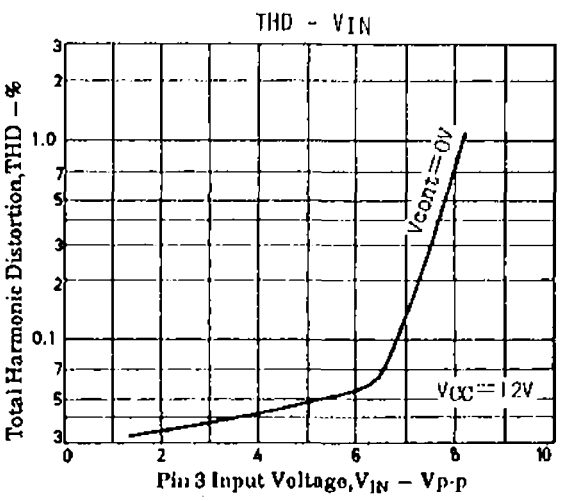
Test Circuit



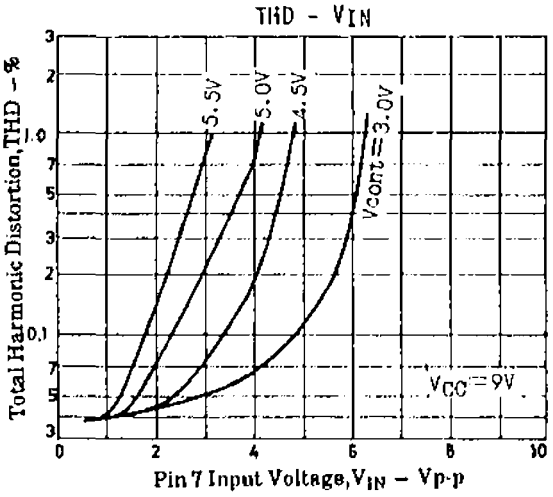
Test Conditions

Item	Symbol	SW mode			Test Point
		SW1	SW2	SW3	
Circuit Current	I_D	c	c	c	A_1
Distortion (1) Distortion (2)	THD THD	b a	b c	c b	V_4 V_4
Noise (1) Noise (2)	e_n e_n	b a	c c	c c	V_4 V_4
Crosstalk (1) Crosstalk (2)	Is^1 Is^2	b a	c a	a c	V_4 V_4
Pedestal	ΔV_{PED}	a-b	c	c	V_1
Pin voltage (pin 1) Pin voltage (pin 3) Pin voltage (pin 3) Pin voltage (pin 7) Pin voltage (pin 7)		b b a a b	c c c c c	c c c c c	V_1 V_2 V_2 V_3 V_3

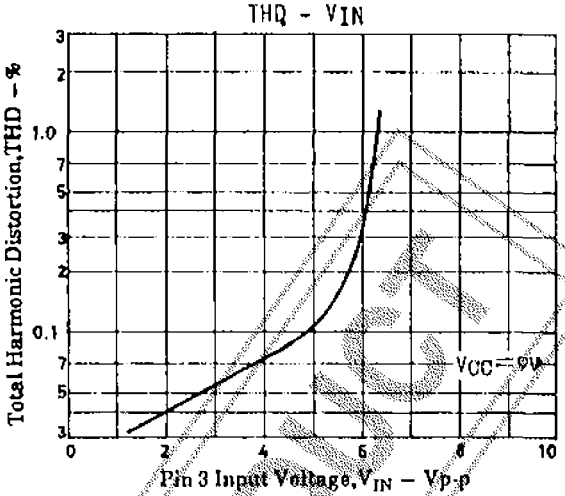




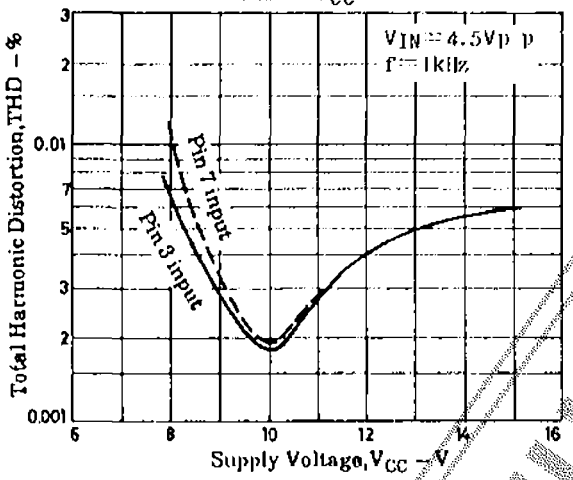
THD - V_{IN}



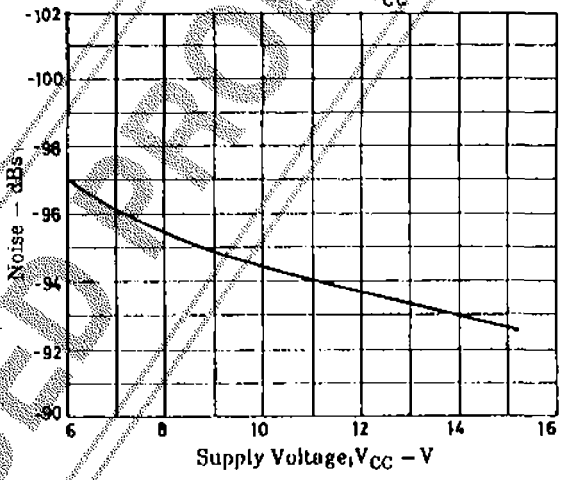
THD - V_{IN}



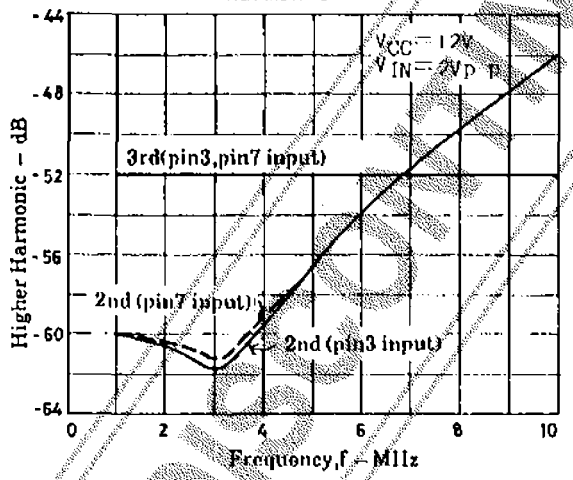
THD - V_{CC}



Noise - V_{CC}



Harmonics - f



Harmonics - V_{CC}