ELECTRONICS, INC.
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NTE1128
Integrated Circuit
TV Video IF Amplifier

Features:

- High Power Gain: 48dB Typ @ f = 58MHz
- AGC Operating by External DC Control Voltage
- High Gain Reduction: 60dB Min @ f = 58MHz
- Low Reverse Transfer Admittance: 1.0μmho Typ @ f = 58MHz
- Nearly Constant Input and Output Admittance Over Entire AGC Range

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Supply Voltage (V_5), V_{CC} 15V
Output Terminal Voltage, V_6, V_7 . . . . . 18V
Gain Control Voltage, V_3 . . . . . 0V to V_{CC}
Input Terminal Voltage, V_1, V_2 . . . . . $10V_{P-P}$
Power Dissipation, P_D 400mW
Derate Above 25°C . . . . . 4mW/°C
Operating Temperature Range, T_{opr} . . . . . –20° to +65°C
Storage Temperature Range, T_{stg} . . . . . –55° to +125°C

Electrical Characteristics: (V_{CC} = 12V, f = 58MHz, T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage (V_5)	V_{CC}		10.8	12.0	13.2	V
Supply Current (I_5)	I_{CC}		9.0	11.0	15.0	mA
IF Input Terminal Voltage	V_1, V_2		–	3.3	–	V
AGC Terminal Voltage	V_3	–30dB AGC	–	7.5	7.8	V
		0dB AGC	6.2	6.6	–	V
Output Stage Current (I_6 + I_7)	I_{OUT}		1.4	2.0	3.0	mA
AGC Range	AGC	f = 58MHz	60	70	–	dB
Power Gain	G_P	f = 58MHz	4.5	4.8	–	dB
Noise Figure	NF	R_S = 50Ω, f = 58MHz	–	6.0	–	dB
Maximum Output Voltage	V_{OM}	V_6, V_7 = 15V	150	–	–	mV_{P-P}
Total Power Dissipation	P_D		–	180	–	mW

Electrical Characteristics (Cont'd): (V_{CC} = 12V, f = 58MHz, T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Admittance Input Conductance	g_i	f = 50MHz	–	0.8	–	mmhos
Parallel Input Capacitance	c_{ip}		–	5.0	–	pF
Output Admittance Output Conductance	g_o	f = 58MHz	–	150	–	µmhos
Parallel Output Capacitance	c_{op}		–	2	–	pF
Reverse Transfer Admittance	y_r	f = 58MHz	–	< 1.0	–	µmhos
Forward Transfer Admittance	y_f	f = 58MHz	–	130	–	mmhos

Pin Connection Diagram
(Front View)