ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE860
Integrated Circuit
Low–Power, Narrow–Band FM IF

Description:

The NTE860 is an integrated circuit in an 18–Lead DIP type package which includes an oscillator, mixer, limiting amp, AFC, quadrature discriminator, op/amp, squelch, scan control and mute switch.

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

Power Supply Voltage, V_{CC}(max) 12V
Operating Supply Voltage Range, V_{CC} . . . . . 4V to 9V
Input Voltage ($V_{CC} \geq 6.0$ Volts), V_{18} . . . . . $1.0V_{rms}$
Mute Function, V_{16} . . . . . –0.7 to $12V_{pk}$
Operating Junction Temperature, T_J . . . . . +150°C
Operating Ambient Temperature Range, T_A . . . . . –30° to +70°C
Storage Temperature Range, T_{stg} . . . . . –65° to +150°C

Electrical Characteristics: (V_{CC} = 6V, f_o = 10.7MHz, $\Delta f = \pm 3.0$kHz, f_{mod} = 1.0kHz, 50Ω source, T_A = +25°C unless otherwise noted)

Parameter	Test Conditions	Min	Typ	Max	Unit
Drain Current (Pin4 & Pin8)	Squelch OFF	–	3.6	6.0	mA
	Squelch ON	–	5.4	7.0	mA
Input for 20dB Quieting		–	8.0	–	μA_{rms}
Input for –3dB Limiting		–	2.0	–	μA_{rms}
Mixer Voltage Gain	Pin18 to Pin3, Open	–	46	–	
Mixer Third Order Intercept	50Ω Input	–	–1.0	–	dBm
Mixer Input Capacitance		–	2.2	–	pF
Recovered Audio, Pin10	Input Signal $1.0mV_{rms}$	450	700	–	mV_{rms}
Detector Center Frequency Slope, Pin10		–	0.3	–	V/kHz
AFC Center Slope, Pin11	Unloaded	–	12	–	V/kHz
Filter Gain		40	51	–	dB
Squelch Threshold	Through 10K to Pin14	–	0.01	1.0	µA
Scan Control Current, Pin15	Pin14 High	–	0.01	1.0	µA
	Pin14 Low	2.0	2.4	–	mA
Mute Switch Impedance	Pin14 High	–	5.0	–	MΩ
	Pin14 Low	–	1.5	–	MΩ

Pin Connection Diagram