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

NTE1843
Integrated Circuit
FM Front End

Description:

The NTE1843 is an integrated circuit in a 9–Lead SIP type package designed for use in FM front–end applications. Typical applications include portable radio and radio cassettes.

Compared with conventional types, supply voltage dependence, overload characteristics and spurious radiation characteristics are improved.

Features:

- Wide Supply Voltage Range: V_{CC} = 1.6V to 6.0V
- Excellent Supply Voltage Dependence of Loacl Oscillator: Oscillator Stop V_{CC} = 0.9V Typ
- Improved Inter–Modulation Charactristics by Double Balanced Type Mixer Circuit
- Low Spurious Radiation
- Built–In Clamping Diode for the Local Oscillator Output

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

Supply Voltage, V_{CC} 8V
Power Dissipation, P_D 500mW
Derate Above 25°C . . . . . 4mW/°C
Operating Temperature Range, T_{opr} . . . . . –25° to +75°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (T_A = +25°C, V_{CC} = 5V, f = 83MHz, f_m = 1kHz, Δf = 22.5kHz dev. unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	I_{CC}	V_{IN} = 0	–	5.2	8.0	mA
–3dB Limiting Sensitivity	$V_{in(lim)}$		–	3.0	7.0	dBμ
Quiescent Sensitivity	Q_S		–	11	–	dBμ
Conversion Gain	G_C		–	31	–	dB
Local OSC Voltage	V_{OSC}	f_{OSC} = 60MHz	150	230	350	mV_{rms}
Parallel Input Resistance (Pin1 Impedance)	r_{ip1}		–	57	–	Ω
Parallel Output Resistance (Pin3 Impedance)	r_{op3}	f = 83MHz	–	25	–	kΩ
Parallel Output Capacitance (Pin3 Impedance)	c_{op3}		–	2.0	–	pF
Parallel Input Resistance (Pin4 Impedance)	r_{ip4}		–	2.7	–	kΩ
Parallel Input Capacitance (Pin4 Impedance)	c_{ip4}		–	3.3	–	pF
Parallel Output Resistance (Pin6 Impedance)	r_{op6}	f = 10.7MHz	–	100	0	kΩ
Parallel Output Capacitance (Pin6 Impedance)	c_{op6}		–	4.8	–	pF
Local OSC Stop Voltage	V_{stop}		–	0.9	1.3	V

Pin Connection Diagram
(Front View)