ELECTRONICS, INC.
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NTE1579
Integrated Circuit
Fm–IM Amplifier/Demodulator

Features:
- Wide Range of the Operating Supply Voltage
- Low Distortion: THD = 0.06% Typ.
- High Signal–to–Noise Ratio: S/N = 75dB Typ.
- High Input SensitivityL $V_{in\ (lim)}$ = 31dBμ Typ.
- Capable of Driving the Signal Meter Under Low Input Signal
- High Stability Against Abnormal Oscillation

Functions:
- FM IF Amplifier
- Quandrature Detector
- Audio Post–Amplifier
- Muting Circuit
- AFC, Center Meter Driver
- Muting Control Driver
- Analog Control Driver

Absolute Maximum Ratings:
Supply Voltage, V_{CC} 16V
Power Dissipation (T_A = +60°C), P_T 624W
Operating Temperature Range, T_{opt} . . . . . –20° to +70°C
Storage Temperature Range, T_{stg} . . . . . –55° to +125°C

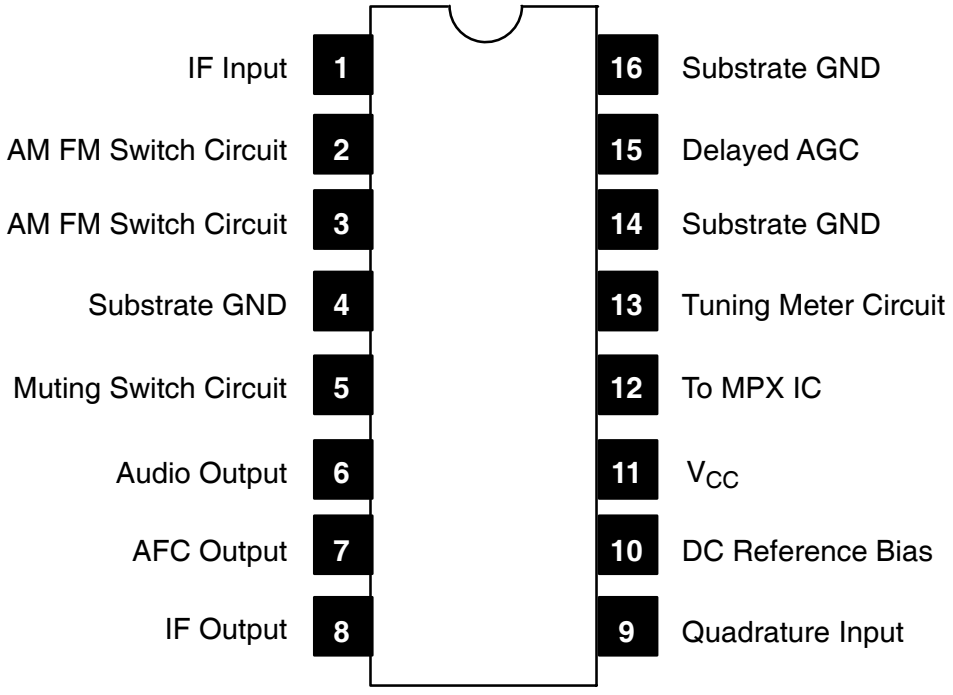
DC Electrical Characteristics: (T_A = +25°C, V_{CC} = 8V, V_{in} = 0dBμ)

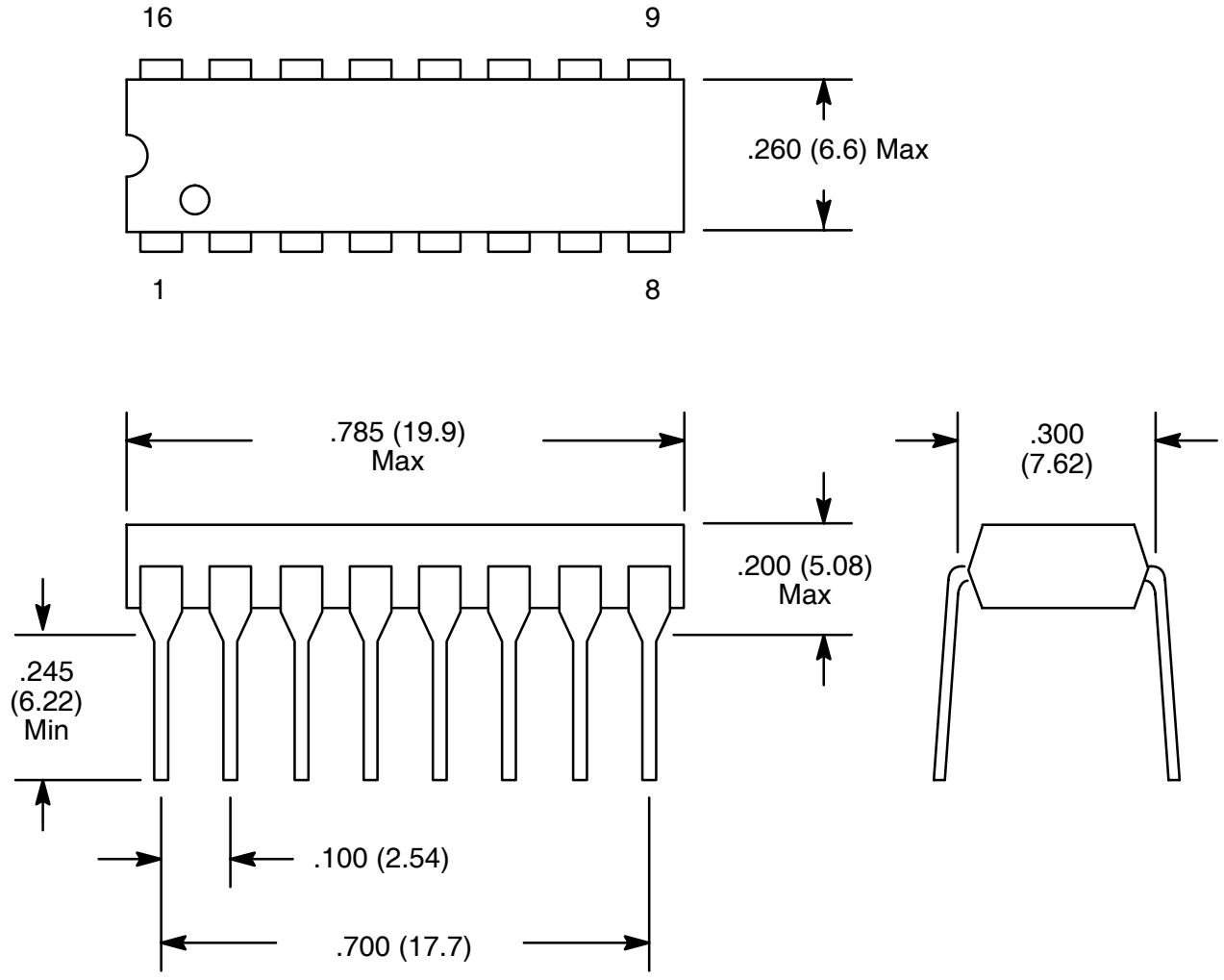
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
DC Voltage at Pin 1	V_1		–	1.95	–	V
DC Voltage at Pin 2	V_2		–	1.95	–	V
DC Voltage at Pin 3	V_3		–	1.95	–	V
DC Voltage at Pin 6	V_6		–	5.60	–	V
DC Voltage at Pin 7	V_7		–	5.60	–	V
DC Voltage at Pin 10	V_{10}		–	5.60	–	V

AC Electrical Characteristics: (T_A = +25°C, V_{CC} = 8V, fc = 10.7MHz, f_m = 1kHz, Δf = 75kHz dev.)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Operating Current	I_{CC}	V_{in} = 100dBμ, Mute ON	–	32	39	mA
Limiting Sensitivity	$V_{in(lim)}$	at −3dB	–	31	37	dBμ
Recovered Output	$V_{O(AF)}$	V_{in} = 100dBμ	230	300	390	$_mV_{rms}$
Total Harmonic Distortion	THD		–	0.06	0.3	%
Signal−to−Noise Ratio	S/N		67	75	–	dB
AM Rejection	AMR	V_{in} = 100dBμ, $f_{m(AM)}$ = 1kHz, 30% MOD	45	55	–	dB
Muting Attenuation	$Mute_{(ATT)}$	V_{in} = 100dBμ, V_5 = 2V	68	75	–	dB
Muting Band Width	$BW_{(Mute)}$	Detuned Frequency under 1.4V of Pin = 12V, V_{in} = 100dBμ	–	100	–	kHz
Muting Sensitivity	$V_{in(Mute)}$	V_{in} under 1.4V of Pin 12 Voltage	–	35	–	dBμ
Analogue Control Voltage	$V_{13−0}$	Pin 13 voltage under V_{in} = 0dBμ	–	0.2	–	V
	$V_{13−60}$	Pin 13 voltage under V_{in} = 60dBμ	–	1.65	–	V
	$V_{13−100}$	Pin 13 voltage under V_{in} = 100dBμ	–	4.7	–	V
AGC Control Voltage	V_{15}	Pin 13 voltage under V_{in} = 86dBμ	–	3.7	–	V

Pin Connection Diagram




16
9
.260 (6.6) Max
1
8
.785 (19.9)
Max
.200 (5.08)
Max
.300
(7.62)
.245
(6.22)
Min
.100 (2.54)
.700 (17.7)