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NTE1142 Integrated Circuit FM Multiplex Stereo Decoder

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{CC}	15V
Supply Current, I_{CC}	18mA
Lamp Driver Current, I_L	100mA
Power Dissipation, P_D	400mW
Operating Temperature Range ($V_{CC} = 12\text{V}$), T_{opr}	-10 to +75°C
Storage Temperature Range, T_{stg}	-40 to +125°C

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Standby Current	I_{CC}	$V_{CC} = 12\text{V}$	-	10	18	mA
Input Impedance	Z_i	$f = 1.0\text{kHz}$	-	20	-	k Ω
Stereo Channel Separation	Sep	$f = 100\text{kHz}$ (Note 1)	-	35	-	dB
		$f = 1.0\text{kHz}$	30	45	-	dB
		$f = 10\text{kHz}$ with 15kHz LPF	-	30	-	dB
Voltage Gain	A_V	38kHz BEF	-	-1.5	-	dB
Channel Balance	Ch. B	Monoaural Input, $f = 1.0\text{kHz}$	-	0.2	2.0	dB
Total Harmonic Distortion	THD		-	0.5	1.0	%
Audio Muting Voltage (Required at Pin 5)	Mute On		0.6	0.85	-	V
	Mute Off		-	1.08	1.5	V
Lamp Indicator Input Level	Lamp ON		-	12	22	mV _{rms}
	Lamp Off		-	8.4	-	mV _{rms}
Stereo-Monoaural Switching Voltage (Required at Pin 4)	Stereo		-	1.13	1.5	V
	Mono		0.6	0.82	-	V
Ultrasonic Frequency Rejection		19kHz (Note 2)	-	30	-	dB
		38kHz (Note 2)	-	25	-	dB
Inherent SCA Rejection	SCA_{rej}	without filter	-	55	-	dB
Attenuation in Muting Mode		(Note 3)	45	55	-	dB

Note 1. Measurement made with 200mV_{rms} Standard Multiplex Composite Signal Containing Left (45%) and Right (45%) audio information with a 10% (19kHz) pilot signal. Modulation frequency is 1.0kHz unless otherwise specified.

Note 2. Referenced to 1.0kHz output signal with Standard Multiplex Composite Input Signal.

Note 3. Referenced to 1.0kHz output signal with either Standard Multiplex Composite or Monoaural Input Signal.

Pin Connection Diagram
(Front View)

