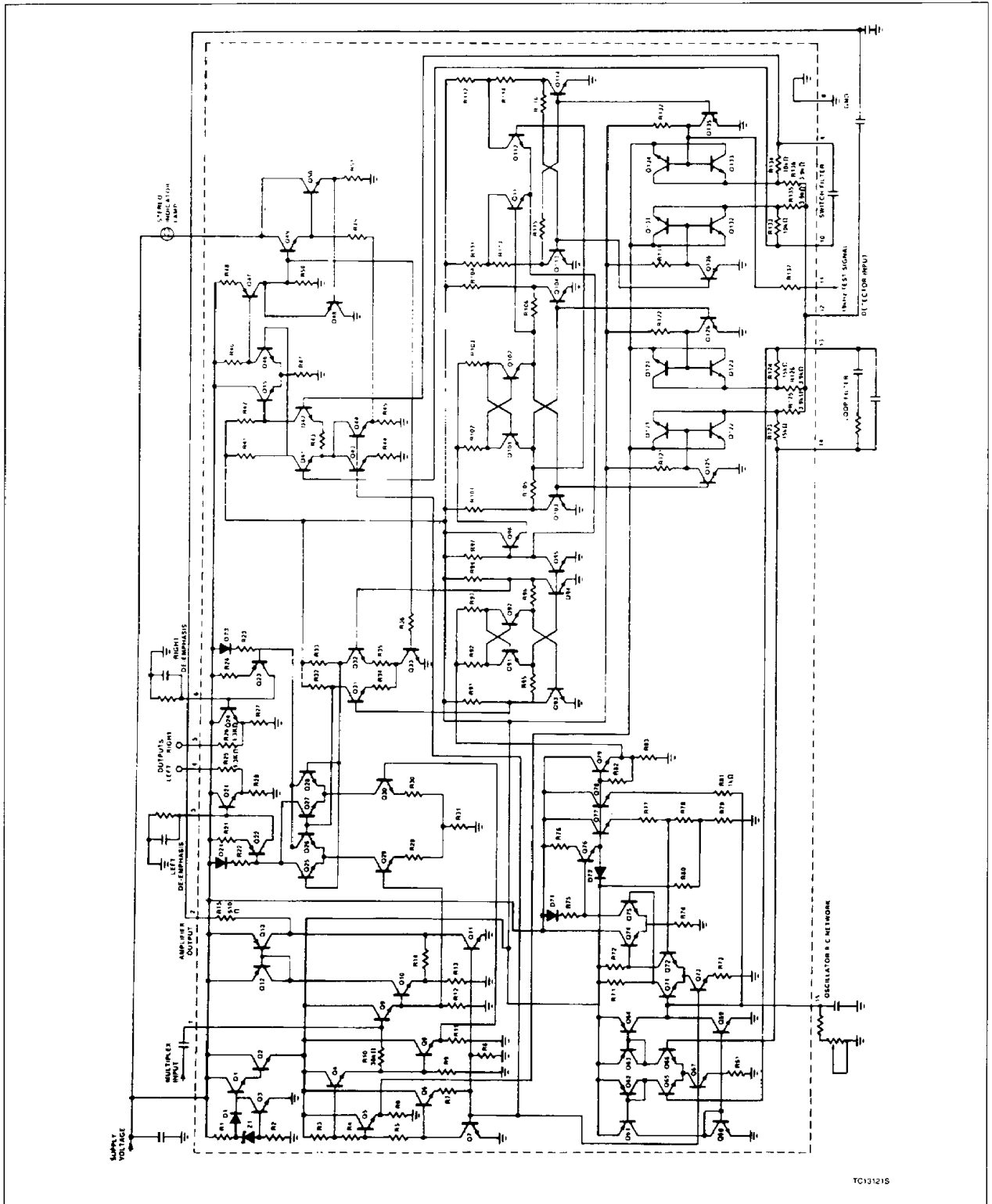


FM Stereo Multiplex Decoder, Phase-Locked Loop

μA758

EQUIVALENT SCHEMATIC



November 14, 1986

www.DataSheet4U.com

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ABSOLUTE MAXIMUM RATINGS

SYMBOL	PARAMETER	RATING	UNIT
V _{CC}	Supply voltage	+18	V
V _{CC}	Supply voltage (≤ 15 seconds)	+22	V
	Voltage at lamp driver terminal (Lamp OFF)	+22	V
P _D	Internal power dissipation	730	mW
T _A	Operating ambient temperature range	-40 to +85	°C
T _{STG}	Storage temperature range	-65 to +125	°C
T _{SOLD}	Lead soldering temperature (10sec max)	300	°C

DC ELECTRICAL CHARACTERISTICS T_A = 25°C, V₊ = +12V, 19kHz pilot level = 30mV_{RMS}, multiplex signal (L = R, pilot OFF) = 300V_{RMS}, modulation frequency = 400Hz or 1Hz, Test Circuit 1, unless otherwise specified.

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			Min	Typ	Max	
I _{CC}	Supply current	Lamp OFF		31	38	mA
I _L	Maximum available lamp current		75	150		mA
V ₇	Voltage at lamp driver terminal	Lamp = 50mA		1.3	1.8	V
R _{IN}	Input resistance		20	35		k Ω
R _{OUT}	Output resistance		0.9	1.3	2.0	k Ω

AC ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			Min	Typ	Max	
$\Delta(V_4 \& V_5)$	DC voltage shift at either output terminal	Stereo to mono operation		30	150	mV
PSRR	Power supply ripple rejection	200Hz, 200mV _{RMS}	35			dB
SEP	Channel separation	100Hz 400Hz 10kHz	30	40 45 45		dB dB dB
BAL	Channel balance			0.3	1.5	dB
A _V	Voltage gain	1kHz	0.5	0.9	1.4	V/V
	Pilot input level	Lamp turn-on Lamp turn-off	2.0	18 7.0	25	mV _{RMS} mV _{RMS}
	Pilot input level hysteresis	Lamp turn-off to turn-on	3.0	7.0		dB
THD	Capture range Total harmonic distortion	Multiplex level = 600mV _{RMS} pilot OFF	2.0	4.0 0.4	6.0 1.0	% %
	19kHz rejection 38kHz rejection SCA rejection ¹		25 25	35 45 70		dB dB dB
VCO	Tuning resistance ²		21.0	23.3	25.5	k Ω
VCO	Frequency drift	0°C \leq T _A \leq 25°C 25°C \leq T _A \leq 70°C		+0.1 -0.4	\pm 2 \pm 2	% %

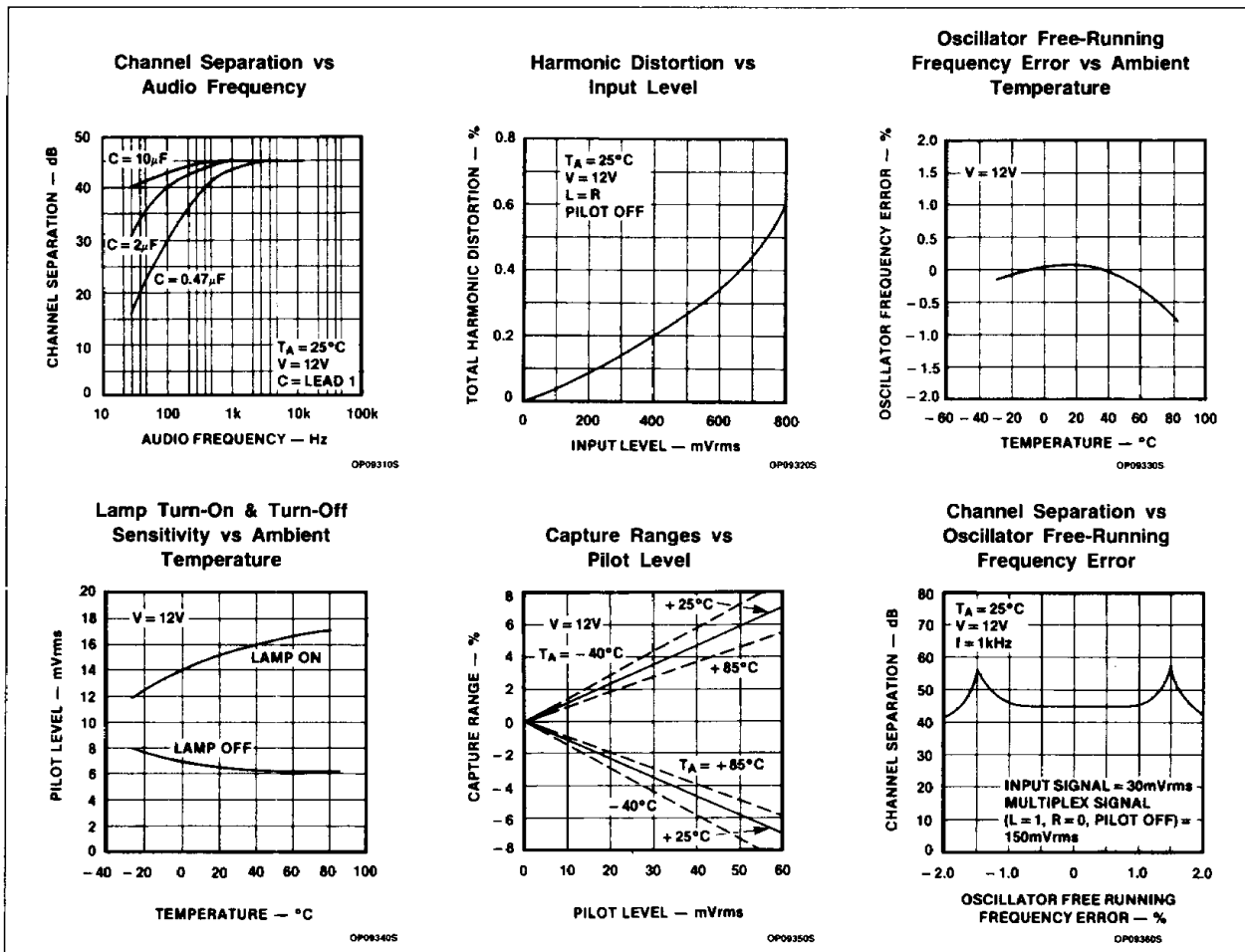
NOTES:

- Measured with a stereo composite consistency of 80% stereo, 10% pilot and 10% SCA as defined in the FCC Rules on Broadcasting.
- Total resistance from Pin 15 to ground, in Test Circuit, required to set reference frequency at Pin 11 to 19kHz \pm 10Hz.

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TYPICAL PERFORMANCE CHARACTERISTICS



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TEST CIRCUIT AND TYPICAL APPLICATION

