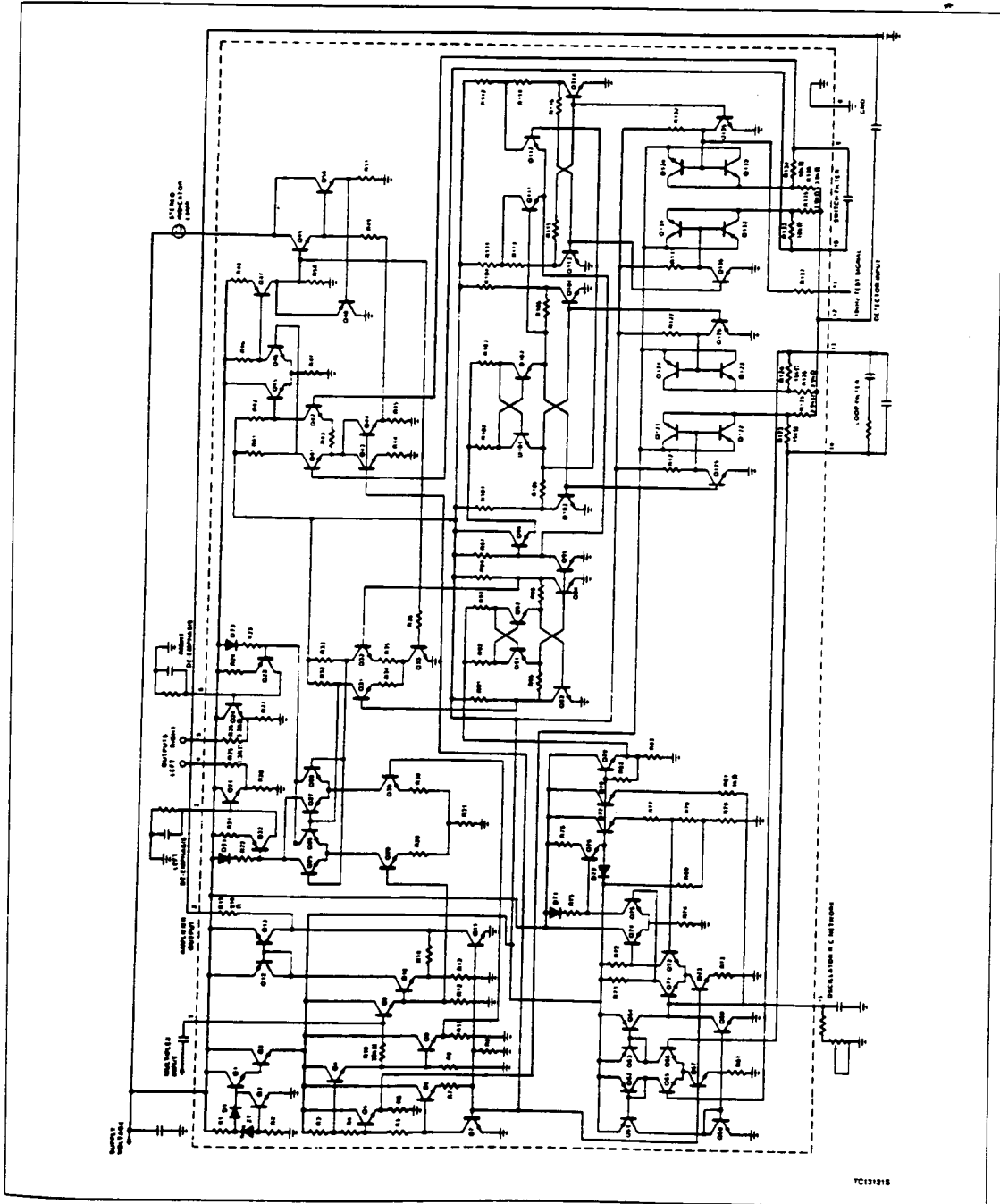


FM Stereo Multiplex Decoder, Phase-Locked Loop

μ A758

EQUIVALENT SCHEMATIC



TC131218

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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		kΩ
R _{OUT}	Output resistance		0.9	1.3	2.0	kΩ

AC ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	TEST CONDITIONS	LIMITS			UNIT
			Min	Typ	Max	
Δ(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	30	40		dB
		400Hz		45		dB
		10kHz		45		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	6.0	%
				0.4	1.0	%
	19kHz rejection		25	35		dB
	38kHz rejection		25	45		dB
	SCA rejection ¹			70		dB
VCO	Tuning resistance ²		21.0	23.3	25.5	kΩ
VCO	Frequency drift	0°C < T _A < 25°C		+0.1	±2	%
		25°C < T _A < 70°C		-0.4	±2	%

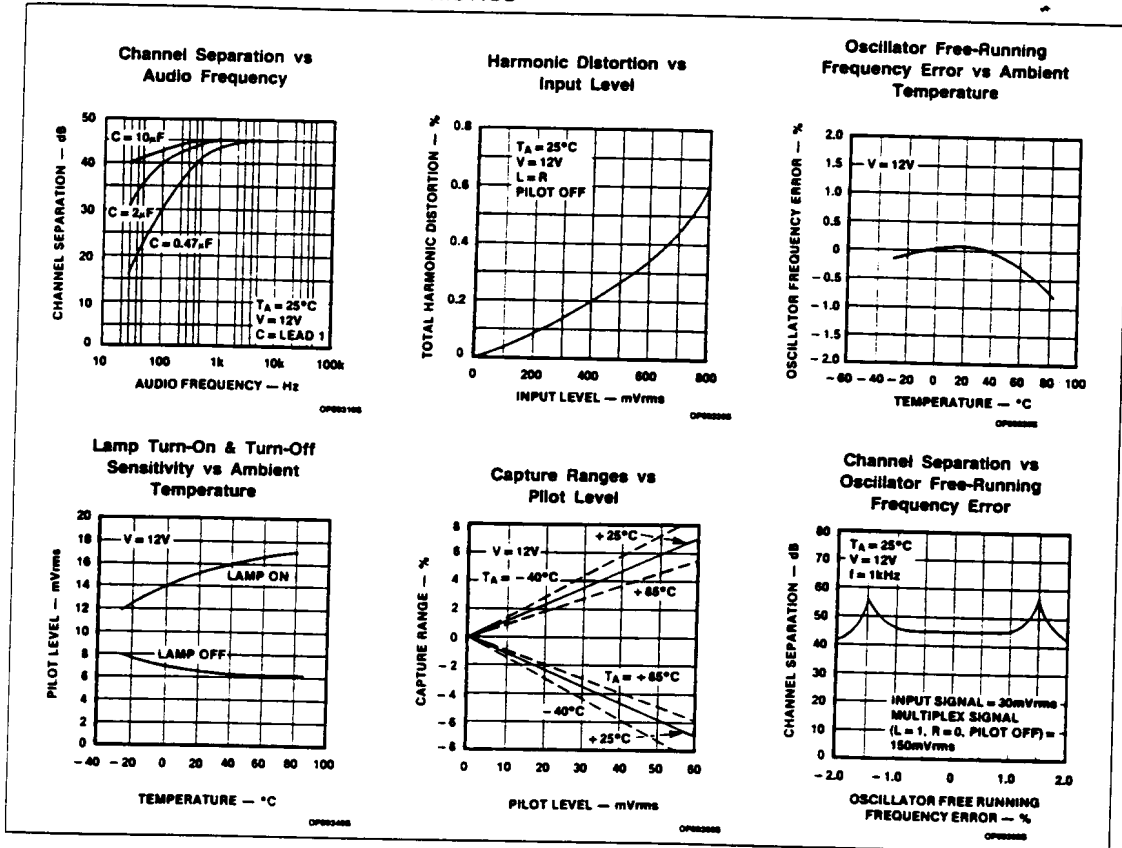
NOTES:

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

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TYPICAL PERFORMANCE CHARACTERISTICS



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TEST CIRCUIT AND TYPICAL APPLICATION

