

YOUDA INTEGRATED CIRCUIT

YD1191

SINGLE-CHIP FM/AM RADIO IC—YD1191

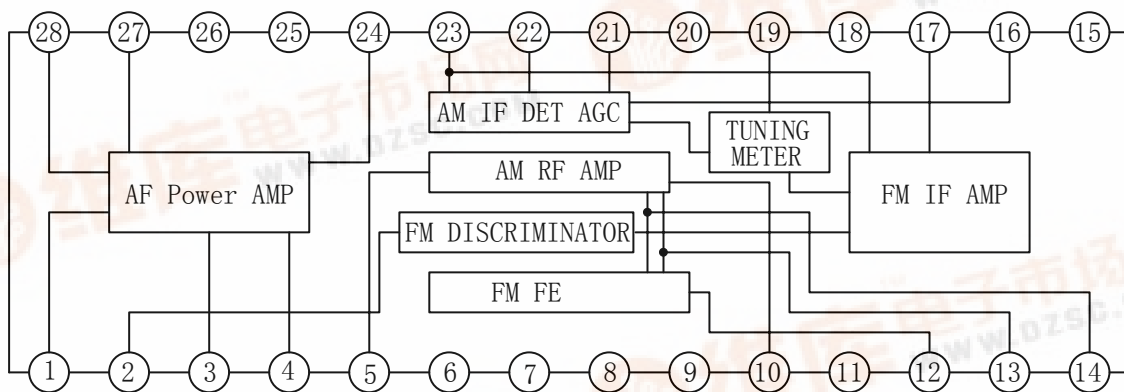
DESCRIPTION

The YD1191 is a one-chip FM/AM radio IC designed for radio-cassette tape recorders.

FEATURES

- *Small number of peripheral components.
- *Low current consumption (Vcc=3V)
For FM:ID=5.3mA (Typ.)
For AM:ID=3.4mA (Typ.)
- *Built-in FM/AM select switch.
- *Built-in RF AGC, IF AGC circuit.
- *Tuning LED driver.
- *Large output of AF amplifier.
Vcc=6V,EIAJ output=500mW (Typ.)
When load impedance 8 Ω

BLOCK DIAGRAM



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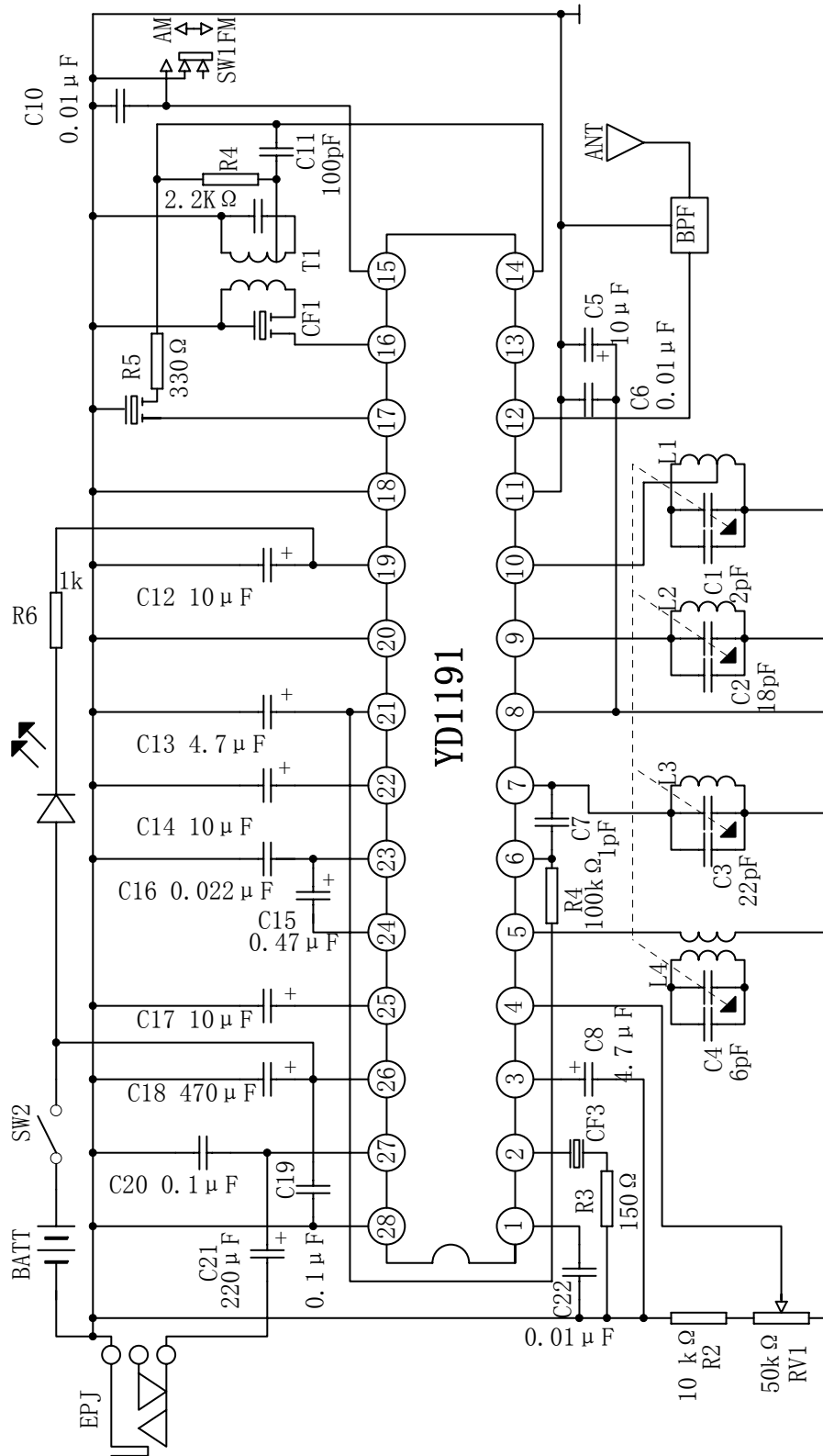
ABSOLUTE MAXIMUM RATINGS (Tamb=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	9	V
Power Dissipation	Pd	700	mW
Operating Temperature	Topr	-10~+70	°C
Storage Temperature	Tstg	-50~+125	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C, Vcc=6V, Unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent Current	Iccq	AM, Vin=0		3.5	10.0	mA
		FM, Vin=0		7.0	14.0	
FM:						
Front End Voltage Gain	Av1	Vin1=40dB μ V/100MHz	32	39	46	dB
Detection Output	VD1	Vin1=90dB μ V/10.7MHz (1kHz,22.5kHz DEV)	39	77.5	155	mV
IF Knee Level	VSEN1	Vin3=level at a point 3dB down		24	32	dB μ V
Detection Output Distortion Factor	THD1	Vin1=90dB μ V/10.7MHz (1KHz, 75kHz DEV)		0.3	2.0	%
FM Meter Current	IB1	Vin3=60dB μ V/10.7MHz	1.8	3.5	7.0	mA
AM:						
Front End Voltage Gain	Av2	Vin2=80dB μ V/1660kHz	15	22	29	dB
IF Voltage Gain	VSEN2	455kHz(kHz 30% MOD), output is -3.4dBm	14	20	27	dB μ
Detector Output	VD2	Vin3=85dB μ V/455kHz (1kHz, 30%MOD)	39	77.5	155	mV
Meter Current	IB2	Vin3=85dB μ V/455kHz (kHz, 30%MOD)	1.3	3.0	7.0	mA
Detection Output Distortion Factor	THD2	Vin2=95dB μ V/1660kHz (1kHz, 30%MOD), Vcc=7.8V		0.6	2.0	%
Audio Voltage Gain	Av3	Vin3=60dB μ V/10.7MHz Vin4=30dBm/1kHz	27	31.5	36	dB
Audio Distortion Factor	THD3	Vin3=60dB μ V/10.7MHz Vin4=-20dBm/1kHz Output is 50mW		0.3	2.5	%
Muting Level	Av4	Vin3=0dB μ V/10.7MHz Vin4=-20dBm/1kHz Output is 50mW	8	15	22	dB

APPLICATION CIRCUIT



OUTLINE DRAWING

