

UTC PC1353 LINEAR INTEGRATED CIRCUIT

ABSOLUTE MAXIMUM RATING(Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Input Voltage(pin 10)	V10	20	V
Input Current(pin10)	I10	1	A
Input Current(pin5)	I5	100	mA
Signal Voltage Input	VI	3	VP-P
Power Dissipation	PD1	0.8(Ta=75°C)Free air	W
Power Dissipation	PD2	1.4*	W
Operating Temperature	TOPR	-20 ~ +75	°C
Storage Temperature	TSTG	-40 ~ +150	°C

*Area of copper pattern on PCB 50 x 50(mm)²

ELECTRICAL CHARACTERISTICS(Ta=25°C)

1.TYPICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	VALUE	UNIT
Current for Pin 10	I10	THD2A=10%	200 ~ 210	mA
Current for Pin 10	I10	THD2B=10%	270 ~ 280	mA
Audio Output Power	POA	THD=3%	1.1	W
Audio Output Power	POB	VCC=18V,RB=330Ω,THD=3%	2.0	W
Bandwidth for Audio Stage	fS	-3dB	50 ~ 50K	HZ

2. IF AMPLIFIER(VCC=12V,RB=100Ω,V14>=1.3V,fo=6.5MHZ,fm=400HZ,f=25KHZ,RG=50Ω)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Pin 5 Voltage	V5A		7.5	8.0	8.5	V
Pin5 Voltage	V5B	VCC=18V,RB=330Ω	7.5	8.0	8.5	V
Pin10 Current	I10A	No input signal	14	19	24	mA
Pin10 Current	I10B	VCC=18V,RB=330Ω No input signal	16	28	35	mA
IF limiter Voltage	VLIM	VOAF(Vi=10mVrms)= -3dB		200	400	μ Vrms
Discriminator Output Voltage	VOAF	Vi=10mVrms	300	360		mVrms
Discriminator Distortion	THD1	Vi=10mVrms		0.7		%
AM rejection ratio	AMR	Modulation 30% fm=400HZ Vi=10mVrms	-40	-50		dB
Maximum attenuation	VATT	V14=0V	-60	-80		dB

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3.AUDIO POWER AMPLIFIER($V_{CC}=12V, R_B=100\Omega, R_L=8\Omega, f=400HZ, R_G=600\Omega$)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Voltage Gain	G _{VAF}	V _i =30mV _{rms}	33	37	41	dB
Output Power	P _{OA}	THD=10%	0.9	1.2		W
Output Power	P _{OB}	V _{CC} =18V, R _B =330Ω THD=10%	2.0	2.4		W
Distortion	THD _{2A}	P _O =0.5W		0.6	2.0	%
Distortion	THD _{2B}	V _{CC} =18V, R _B =330Ω P _O =0.5W		0.5	2.0	%
Total Distortion(IF+Audio)	THD ₃	P _O =0.5W V _i =10mV _{rms}	v	1.5	4.0	%

TEST CIRCUIT

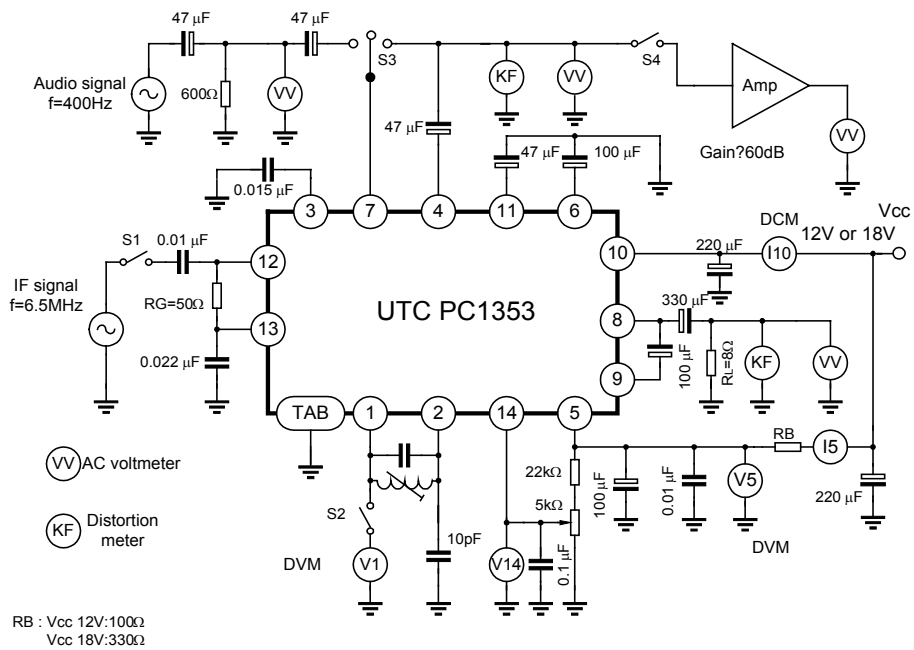
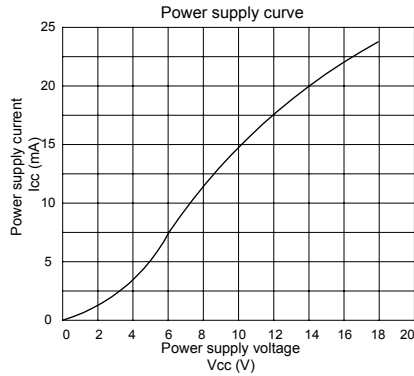
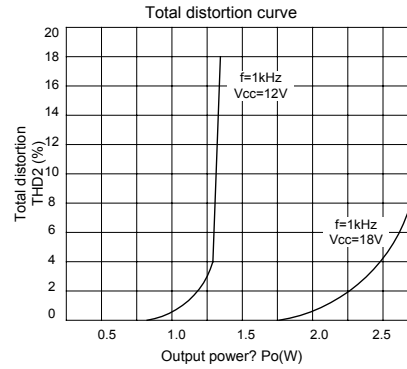
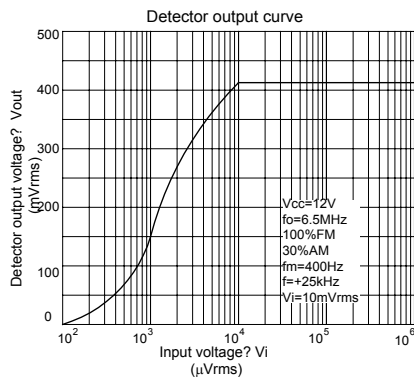
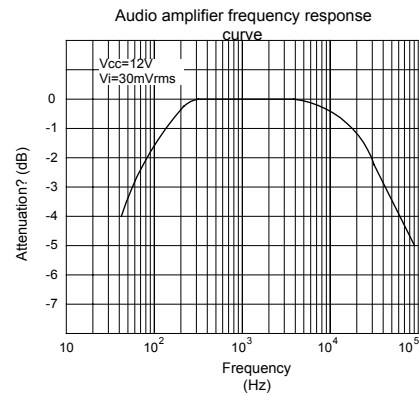
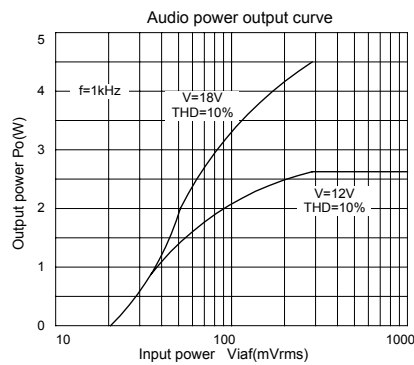
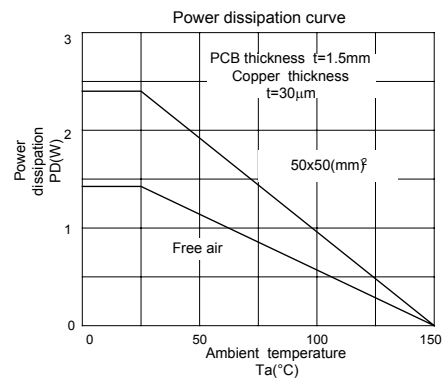


Fig 2

UTC PC1353 LINEAR INTEGRATED CIRCUIT

TYPICAL PERFORMANCE CHARACTERISTICS



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