

CAR AUDIO

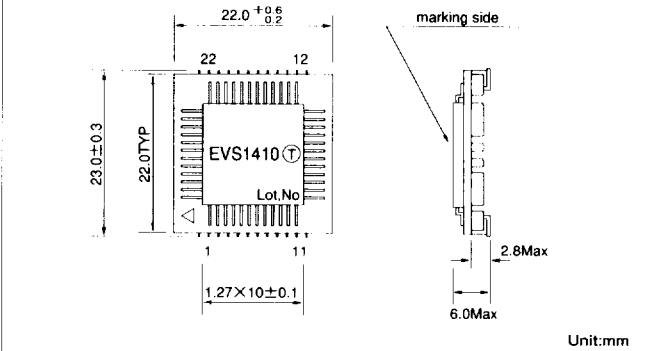
Electronic Potentiometer [SMD]

EVS1410 is a highly integrated hybrid IC which is developed for realizing mounted type of EV1400.

FEATURES

- As it is mounted type hybrid IC, the substrate design can be more effective and the mounted substrate can be more integrated.
- Tray feeding is enabled so that the automatic substrate mounting is easily realized.
- Ordinary micro computer can control the volume as serial control is done at 5V input.
- Potentiometer: 81 positions between 0dB and -79dB (1dB step) and to $-\infty$ can be controllable separately by L and R.
- Loudness function is contained.
- Fader: Rear side or front side output only can be variable at 16 positions.
- Bass/treble: ± 14 dB can be variable at 15 positions of 2dB each.

OUTLINE DIMENSIONS

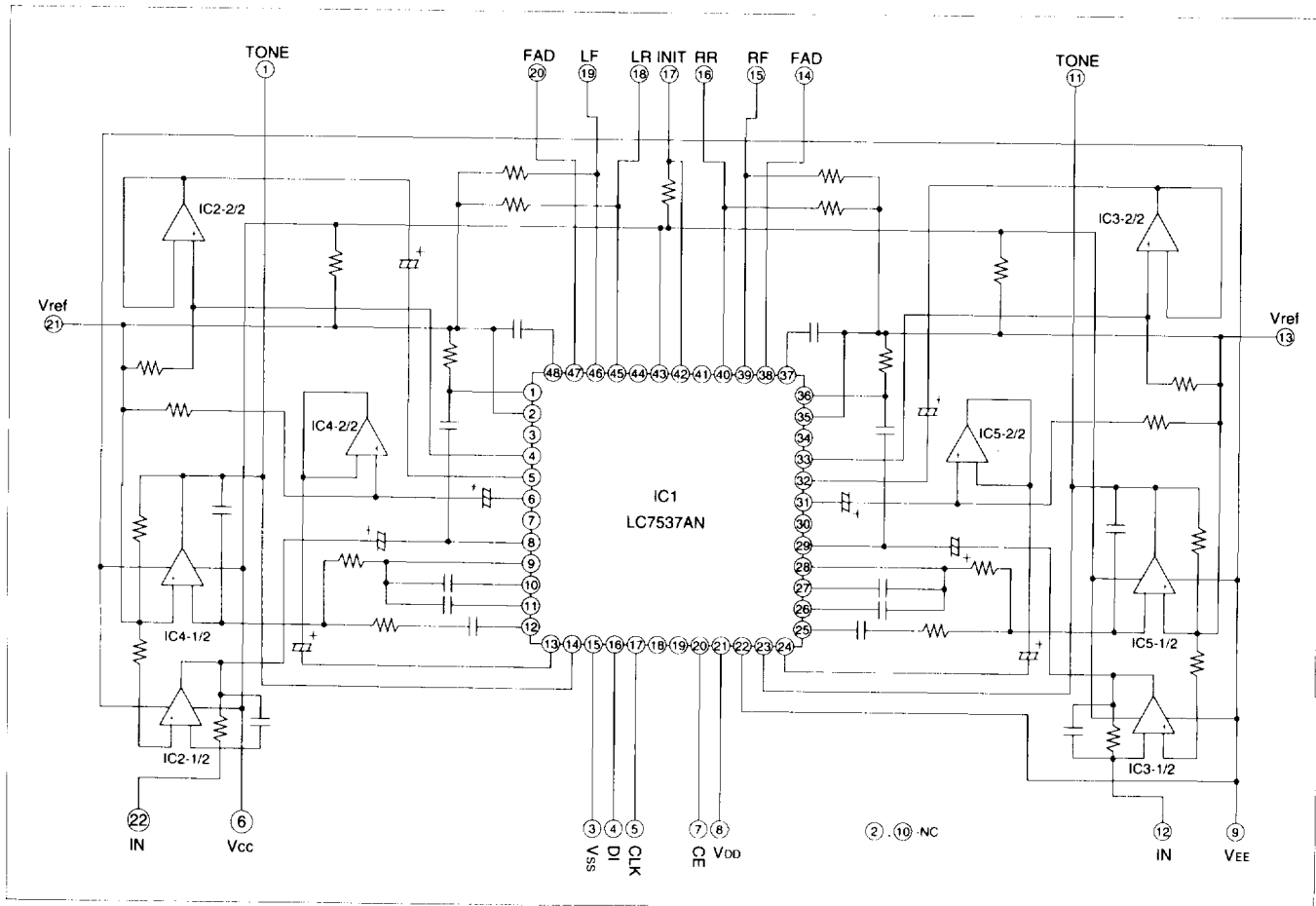


ABSOLUTE MAXIMUM RATING

(TA = 25°C)

Item	Symbol	Rating	Unit
Supply voltage 1	VCC	16	V
Supply voltage 2	VDD	7	V
Power dissipation	PD	500	mW
Operating temperature	Topr	-30 - +85	°C
Storage temperature	Tstg	-30 - +85	°C

INTERNAL CIRCUIT



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ELECTRICAL CHARACTERISTICS

(I) TEST CONDITION $T_A = 25^\circ\text{C}$, $V_{CC} = 8.0 \pm 0.1\text{V}$, $V_{DD} = 5.0 \pm 0.1\text{V}$

(Note: Volume, Bass, Treble & Fader are set in 0dB and loudness = off unless noted.)

(II) TEST ITEMS

No.	Item	Symbol	Specification			Unit	Condition	
			Min	Typ	Max			
1	Supply current	I_{CC}		25	40	mA	quiescent	
2	Voltage gain	G_v	-1	0	+1	dB		
3	Frequency characteristics	V_{f1}	-1	0	+1	dB	$f = 20\text{Hz}$	
		V_{f2}	-1	0	+1	dB	$f = 20\text{kHz}$	
4	Tone change	Bass boost	TB_1	+8	+10	+12	dB	$f = 100\text{Hz}$ Bass;set in +10dB
		Bass cut	TB_2	-12	-10	-8	dB	Bass;set in -10dB
		Treble boost	TT_1	+8	+10	+12	dB	$f = 10\text{kHz}$ Treble;set in +10dB
		Treble cut	TT_2	-12	-10	-8	dB	Treble;set in -10dB
5	Loudness Characteristics	LD_1	+7	+9.5	+12	dB	$f = 100\text{Hz}$	
		LD_2	+3	+5.5	+8	dB	$f = 10\text{kHz}$	
6	Volume attenuation	V_{Min}		-80	-70	dB	Volume;set in $-\infty\text{dB}$	
7	Fader attenuation	F_{Min}		-80	-70	dB	Fader;set in $-\infty\text{dB}$	
8	Crosstalk	CT		-90	-80	dB		
9	Total harmonic distortion	THD		0.01	0.07	%	30kHz LPF used	
10	Max. output voltage	$V_{o\ max}$	1.2	1.8		V _{rms}	$THD = 1\%$	
11	Noise level	V_N		6	14	μV_{rms}	IN:short, DIN-audio filter used	

TEST CIRCUIT

