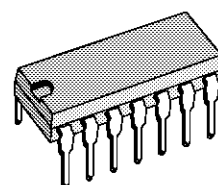


AM SIF CIRCUIT

- SOUND AM SYNCHRONOUS DEMODULATOR
- AM/FM AUDIO SWITCH
- AV/TV AUDIO SWITCH
- MUTE INPUT



DIP14
(Plastic Package)

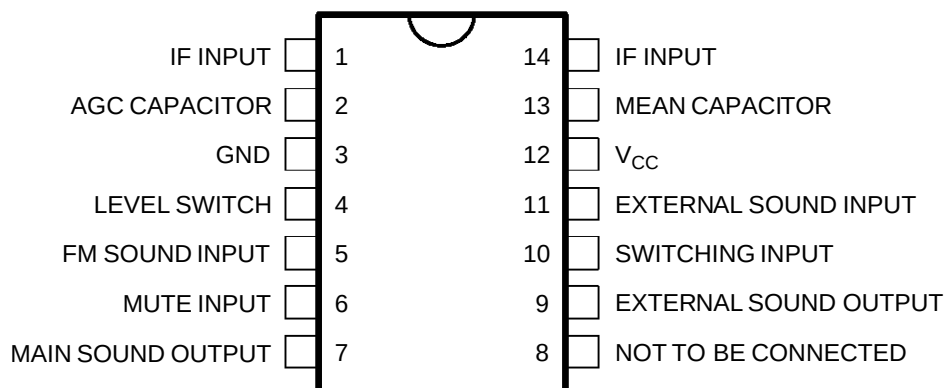
ORDER CODE : STV8225

DESCRIPTION

The STV8225 is intended for the demodulation of the AM sound of the L standard.

Used as an add on to the STV8224 it permits to design a multistandard set with the needed switches for one SCART plug.

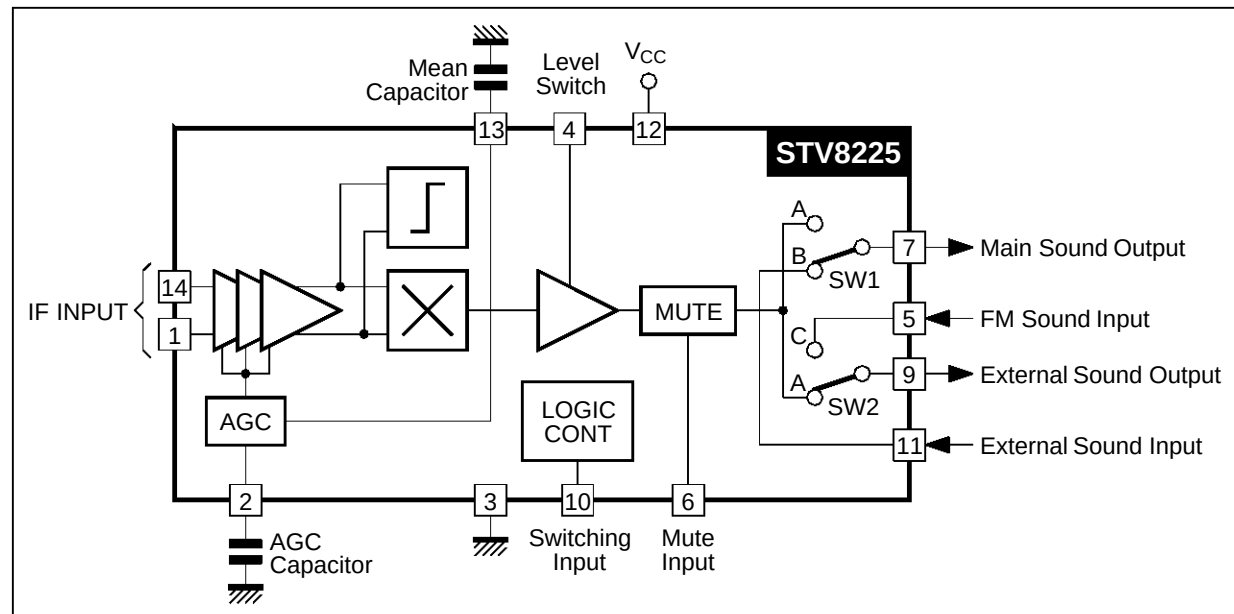
PIN CONNECTIONS



8225-01EPS

STV8225

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CC}	Supply Voltage	13	V
T_{stg}	Storage Temperature	-40, +150	$^{\circ}\text{C}$
T_{oper}	Operating Temperature	0, +70	$^{\circ}\text{C}$
P_{tot}	Power Dissipation	0.35	W

THERMAL DATA

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction-ambient Thermal Resistance	90	$^{\circ}\text{C/W}$

ELECTRICAL CHARACTERISTICS ($V_{CC} = 9\text{V}$, $V_{IN} = 10\text{mV}_{RMS}$, $f_{SC} = 32.4\text{MHz}$, $f_m = 1\text{kHz}$, $m = 54\%$ modulation depth, Audio BW = 40Hz to 15kHz, $T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_{CC}	Supply Voltage	Pin 12	8	9	10	V
I_{CC}	Supply Current	Pin 12		20	30	mA
	Supply Voltage Rejection	Pins 9, 7, 12 - $V_{Ripple} = 0.5V_{PP}$, $f = 100\text{Hz}$	45	53		dB

IF AMPLIFIER

R_i 1, 14	Input Resistance (Pins 1-14)	Resistance between Pin 1 and 14		2		$k\Omega$
C_i 1, 14	Input Capacitance (Pins 1-14)	Capacitance between Pin 1 and 14		2		pF
$V_{IF\ min}$	Minimum IF Input Signal	IF input signal for $V_{OUT} = V_{NOM} - 3\text{dB}$		70		μV_{RMS}
$V_{IF\ max}$	Maximum IF Input Signal	IF input signal for $V_{OUT} = V_{NOM} + 1\text{dB}$		75		mV_{RMS}
DAV	AGC Range	$DAV = V_{IF\ max} / V_{IF\ min}$		61		dB
I_{AGC}	Maximum AGC Output Current (Pin 2)	Charging and discharging	± 35	± 50	± 65	μA
	IF Bandwidth	-3dB		50		MHz

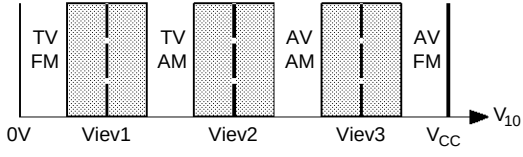
ELECTRICAL CHARACTERISTICS (continued) ($V_{CC} = 9V$, $V_{IN} = 10mV_{RMS}$, $f_{SC} = 32.4MHz$, $f_M = 1kHz$, $m = 54\%$ modulation depth, Audio BW = 40Hz to 15kHz, $T_{amb} = 25^\circ C$, unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
AM DEMODULATOR						
	AF Output Voltage (Pins 7-9)	Level switch (Pin 4) open Level switch (Pin 4) connected to GND	200 400	250 500	300 600	mV_{RMS} mV_{RMS}
	AF Bandwidth (Pins 7-9) Lower Limit Upper Limit	-3dB versus nominal signal	50		40	Hz kHz
	Harmonic Distorsion (Pins 7-9)	THD + Noise		0.7	1.8	%
	S/N (Pins 7-9)	Weighted according to CCIR 468-4		55		dB

MUTE

	Threshold Level (Pin 6)	Mute mode if voltage below threshold	0.2	0.3	0.4	V
	Attenuation (Pins 7-9)	Level switch (Pin 4) connected to GND TV - AM mode	80	96		dB

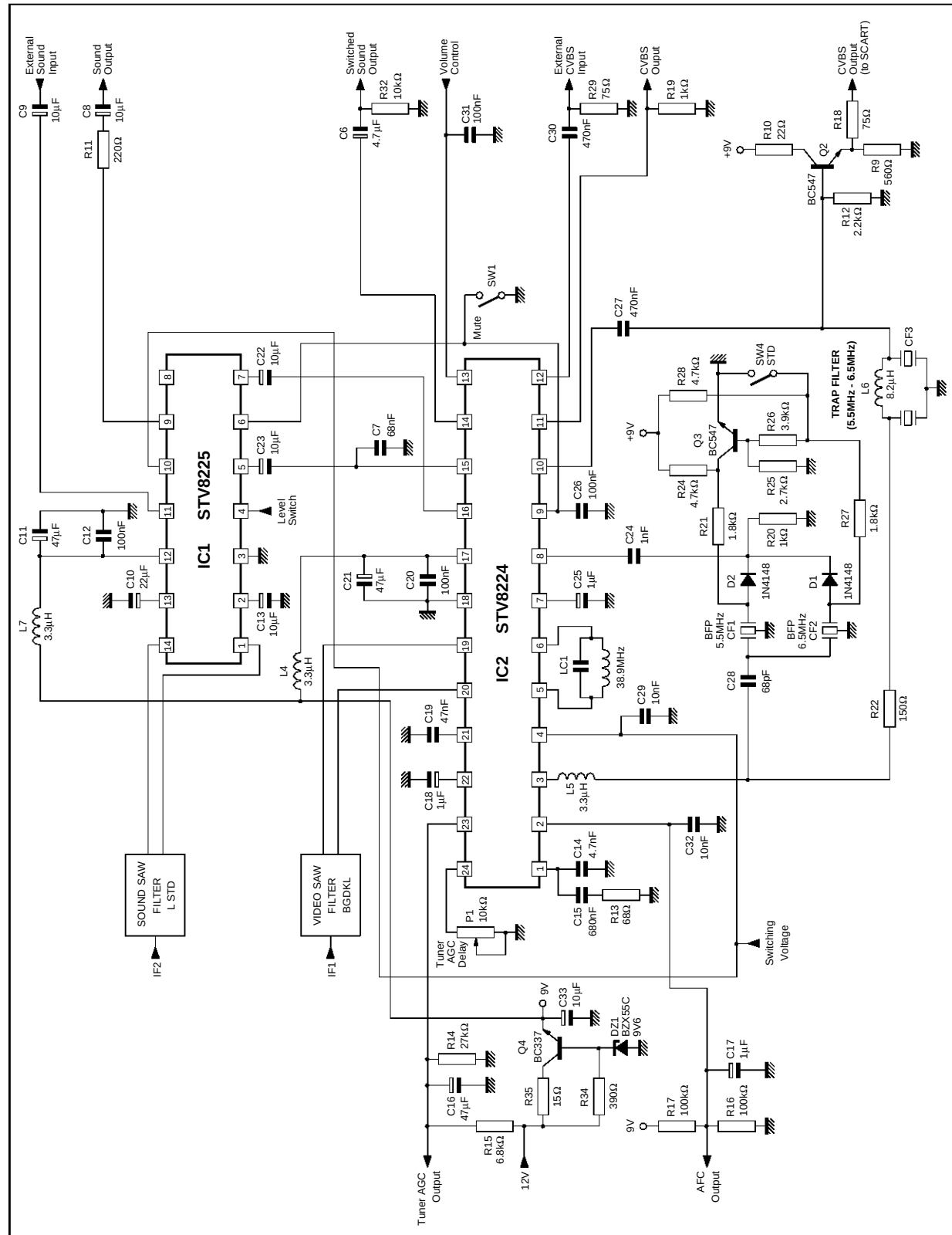
AUDIO SWITCHES

	Switching Voltage (Pin 10)	Operation mode 				
View1	Level 1 (Pin 10)	For voltage below this level TV-FM mode : Pin 7 connected to A Pin 9 connected to C	1.8	2.3	2.6	V
View2	Level 2 (Pin 10)	For voltage below this level TV-AM mode : Pin 7 connected to A Pin 9 connected to A	4.1	4.6	4.9	V
View3	Level 3 (Pin 10)	For voltage below this level AV-AM mode : Pin 7 connected to B Pin 9 connected to A For voltage above this level AV-FM mode : Pin 7 connected to B Pin 9 connected to C	6.4	6.8	7.2	V
	Input Current (Pin 10)	Source current		0.3	2	μA
	Input Dynamic Range (Pins 5-11)		2			V_{RMS}
	Input Resistance (Pins 5-11)		35	50		$k\Omega$
	Switch Gain	$V_{IN} = 2V_{RMS}$, $f = 1kHz$ Pin 7 vs Pin 11 and Pin 9 vs Pin 5	-0.6	-0.1	0.4	dB
	Crosstalk	$f = 1kHz$	70	85		dB
	Output Resistance (Pins 7-9)		70	100	130	Ω
	Output Current Source (Pins 7-9)			1		mA
	Switch Distorsion	$V_{IN} = 2V_{RMS}$, $f = 1kHz$, THD + Noise, Pin 7 vs Pin 11 and Pin 9 vs Pin 5		0.1	0.5	%
	Output Noise	Unweighted		7	20	μVp
	DC Plop at AF Output Pin			10	50	mV

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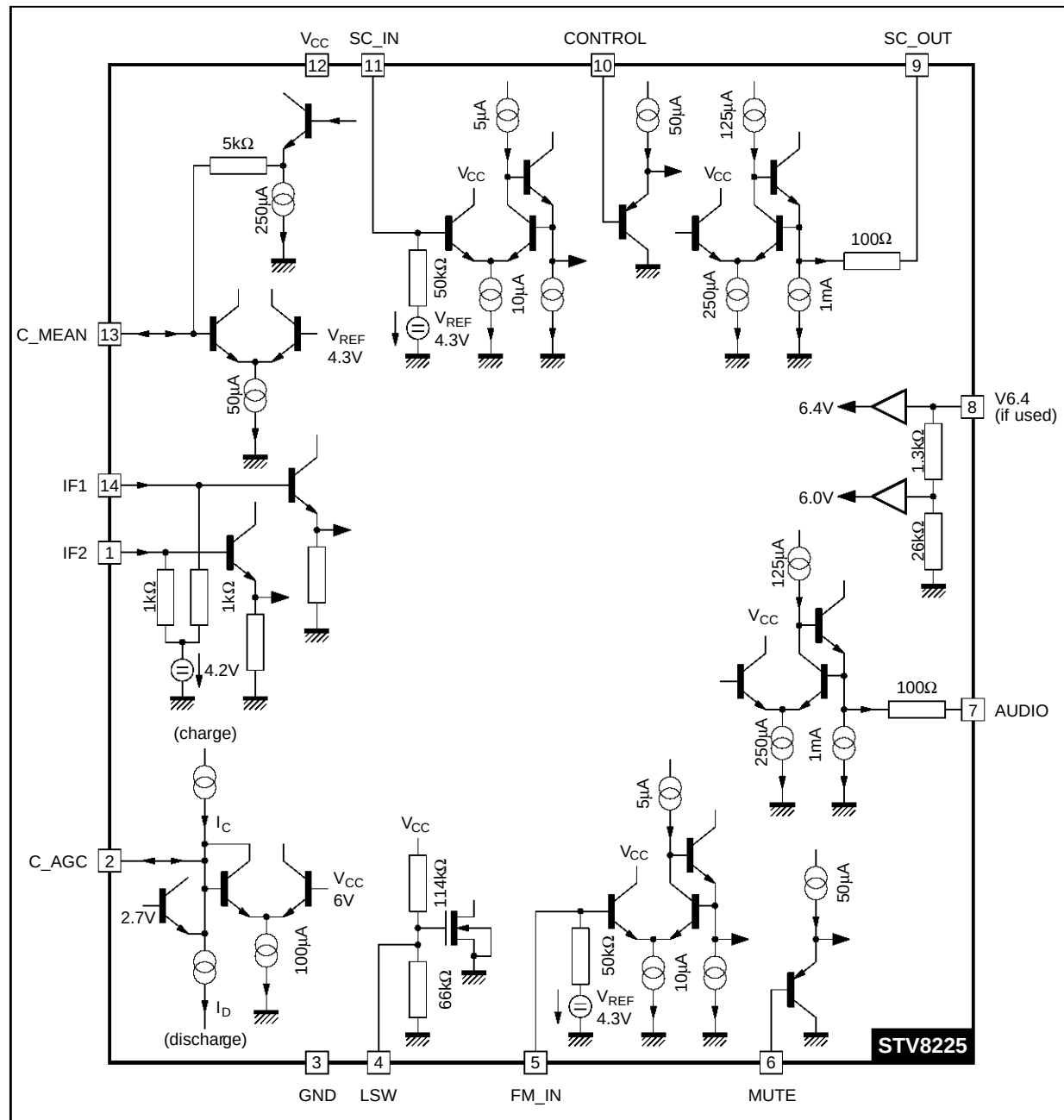
APPLICATION DIAGRAM

STV8224 - STV8225



8225-06.EPS

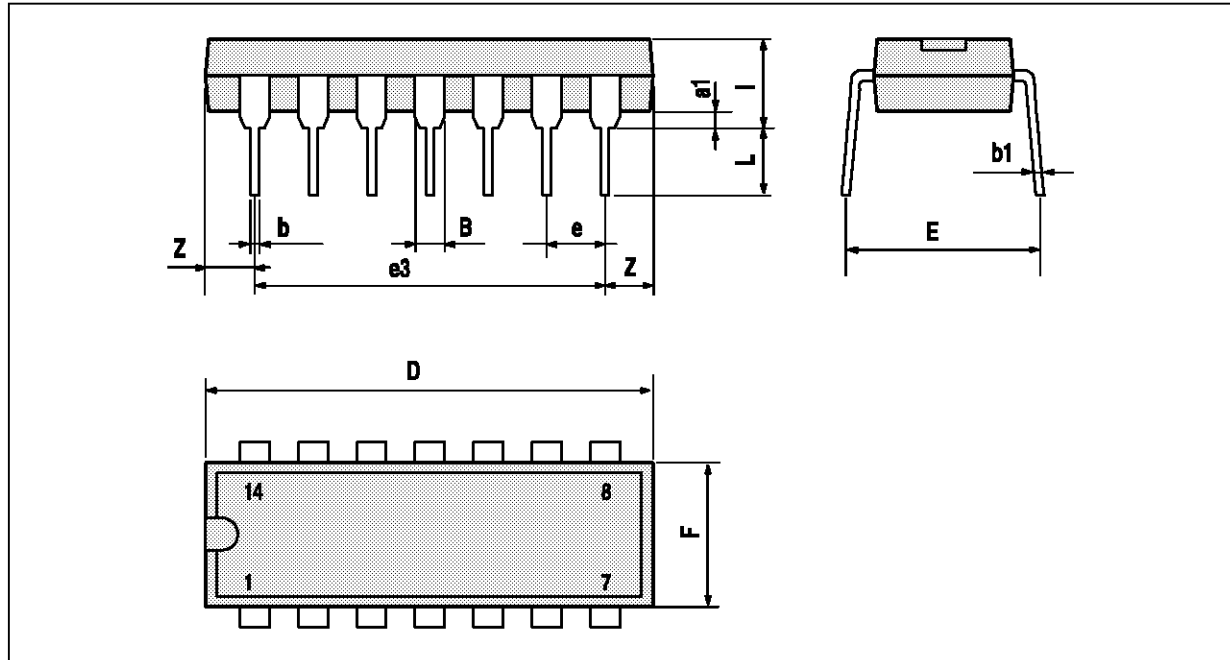
INPUT/OUTPUT PINS CONFIGURATION



8225-04.EPS

PACKAGE MECHANICAL DATA

14 PINS - PLASTIC DIP



PM-DIP14/WMF

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
a1	0.51			0.020		
B	1.39		1.65	0.055		0.065
b		0.5			0.020	
b1		0.25			0.010	
D			20			0.787
E		8.5			0.335	
e		2.54			0.100	
e3		15.24			0.600	
F			7.1			0.280
i			5.1			0.201
L		3.3			0.130	
Z	1.27		2.54	0.050		0.100

DIP14,TBL

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