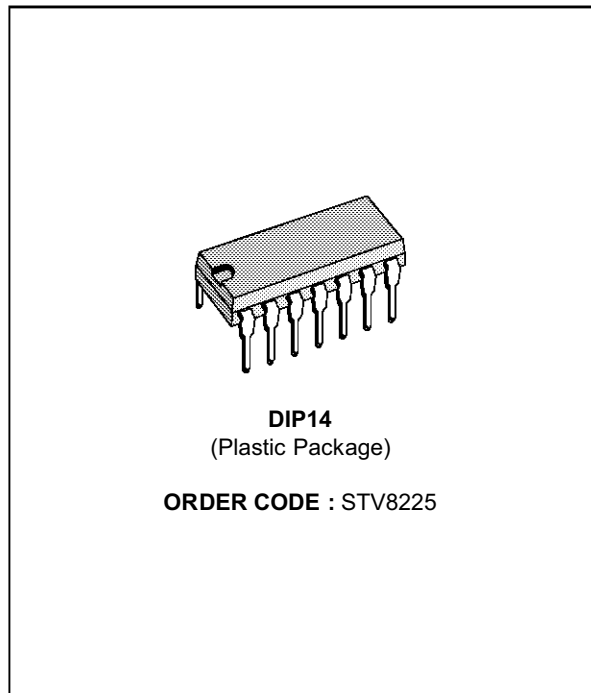


AM SIF CIRCUIT

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

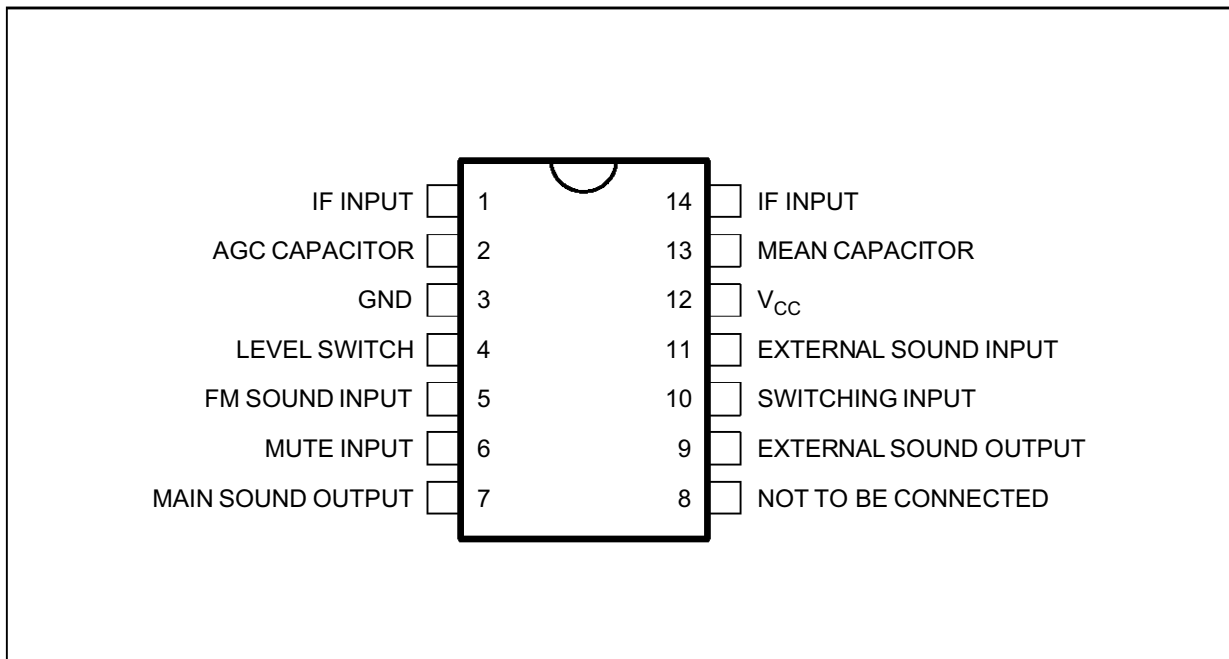


DESCRIPTION

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

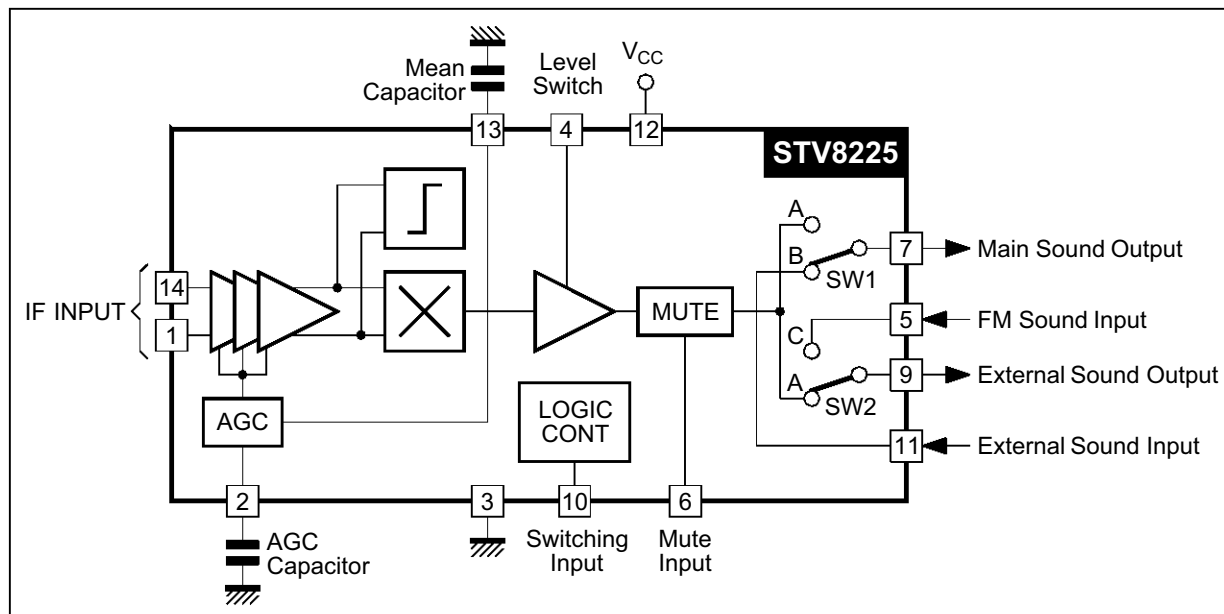
Used as an add on to the STV8224 it permits to design a multistandard set with the needed switches for one SCART plug.

PIN CONNECTIONS



8225-01.EPS

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	Supply Voltage	13	V
T _{stg}	Storage Temperature	-40, +150	°C
T _{oper}	Operating Temperature	0, +70	°C
P _{tot}	Power Dissipation	0.35	W

THERMAL DATA

Symbol	Parameter	Value	Unit
R _{th(j-a)}	Junction-ambient Thermal Resistance	Max. 90	°C/W

ELECTRICAL CHARACTERISTICS (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°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 = 100Hz	45	53		dB

IF AMPLIFIER

R _i 1, 14	Input Resistance (Pins 1-14)	Resistance between Pin 1 and 14		2		kΩ
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} - 3dB		70		μV _{RMS}
V _{IF max}	Maximum IF Input Signal	IF input signal for V _{OUT} = V _{NOM} + 1dB		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

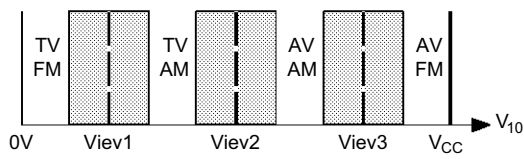
ELECTRICAL CHARACTERISTICS (continued) ($V_{CC} = 9V$, $V_{IN} = 10mV_{RMS}$, $f_{SC} = 32.4MHz$, $f_M = 1kHz$, $m = 54\%$ modulation depth, Audio BW = 40Hz to 15kHz, $T_{amb} = 25^{\circ}C$, unless otherwise specified)

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

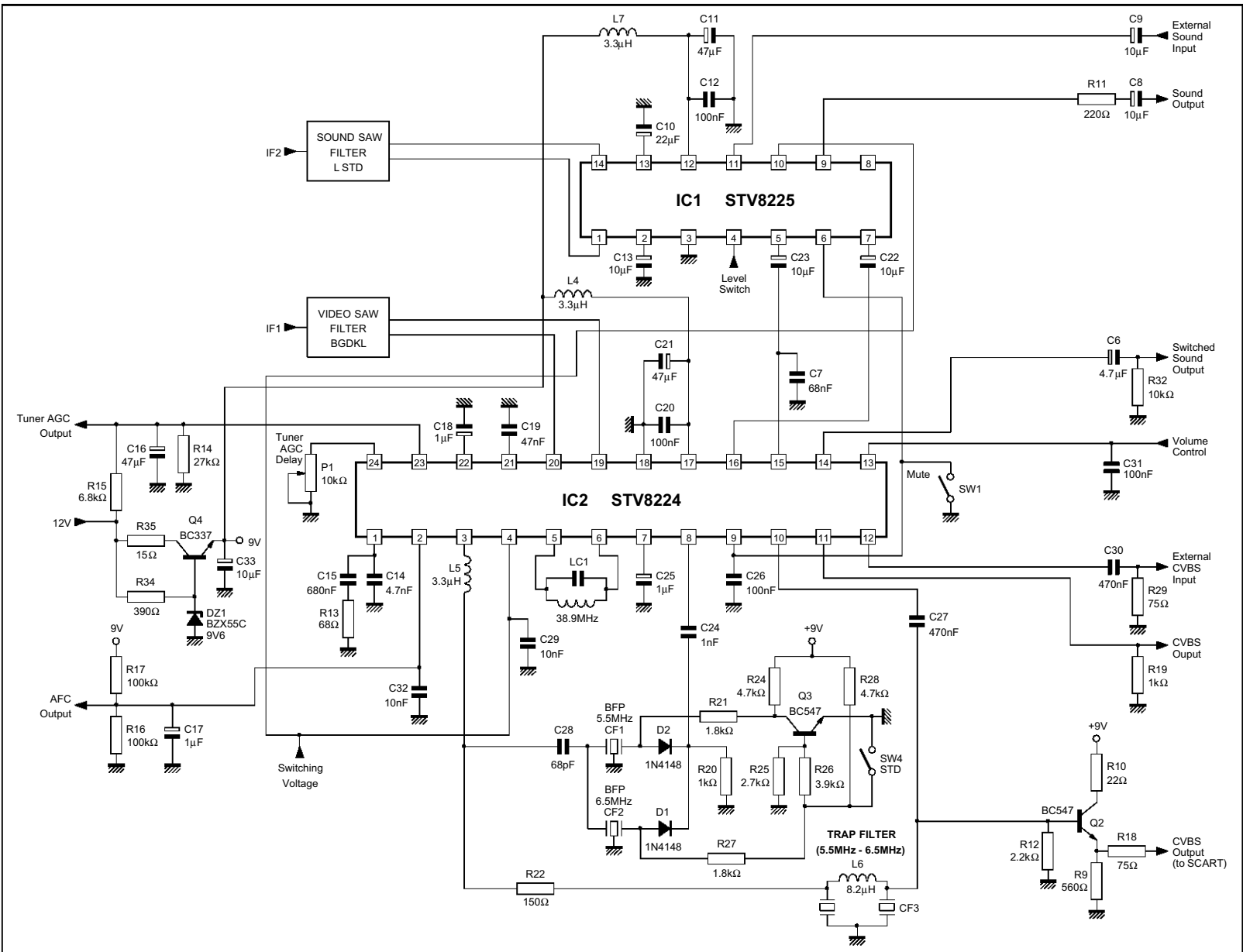
	Threshold Level (Pin 6)	Mute mode if voltage below threshold	0.2	0.3	0.4	V
	Attenuation (Pins 7-9)	Level switch (Pin 4) connected to GND TV - AM mode	80	96		dB

AUDIO SWITCHES

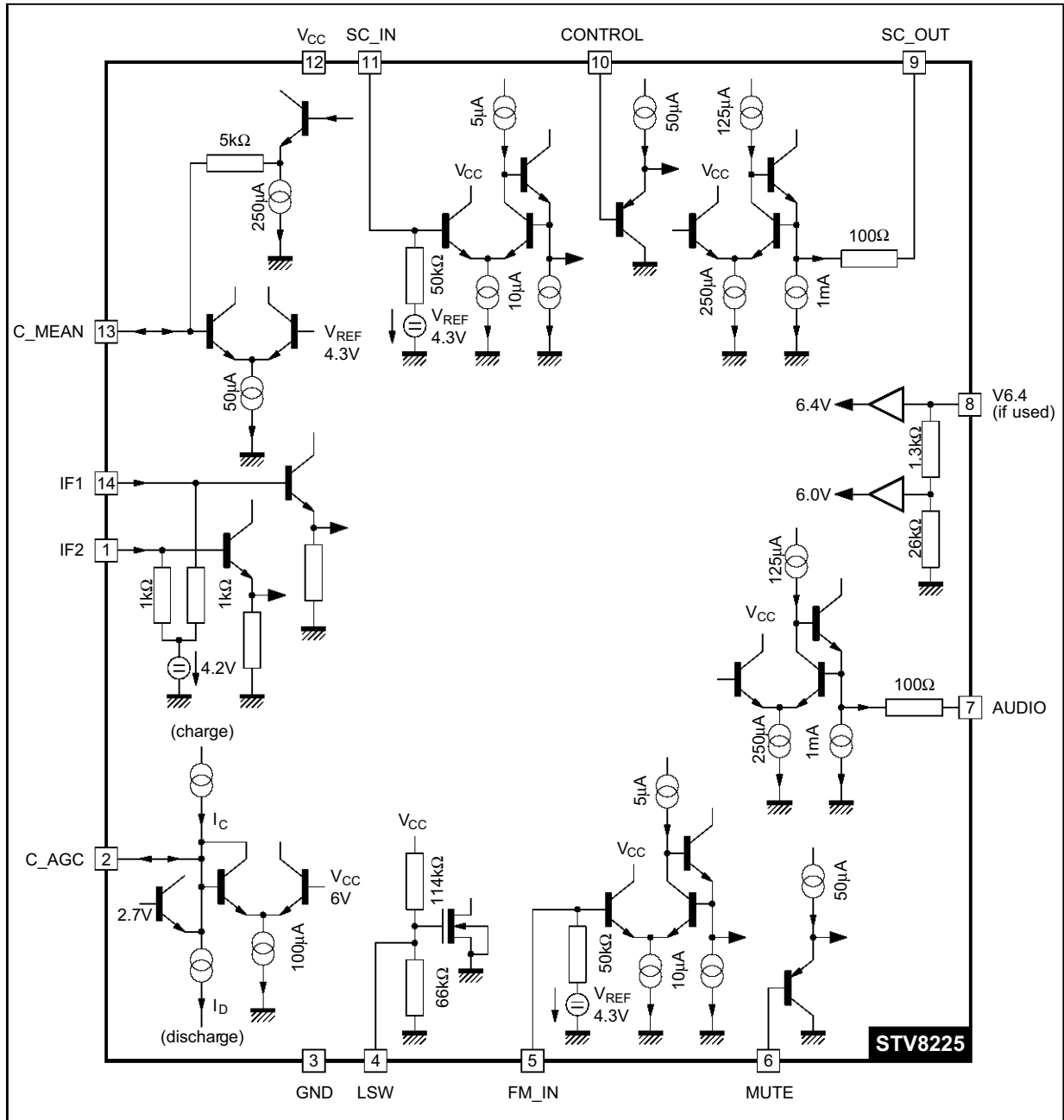
	Switching Voltage (Pin 10)	Operation mode 				
View1	Level 1 (Pin 10)	For voltage below this level TV-FM mode : Pin 7 connected to A Pin 9 connected to C	1.8	2.3	2.6	V
View2	Level 2 (Pin 10)	For voltage below this level TV-AM mode : Pin 7 connected to A Pin 9 connected to A	4.1	4.6	4.9	V
View3	Level 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 Ω
	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

8225-04.TBL

APPLICATION DIAGRAM
STV8224 - STV8225

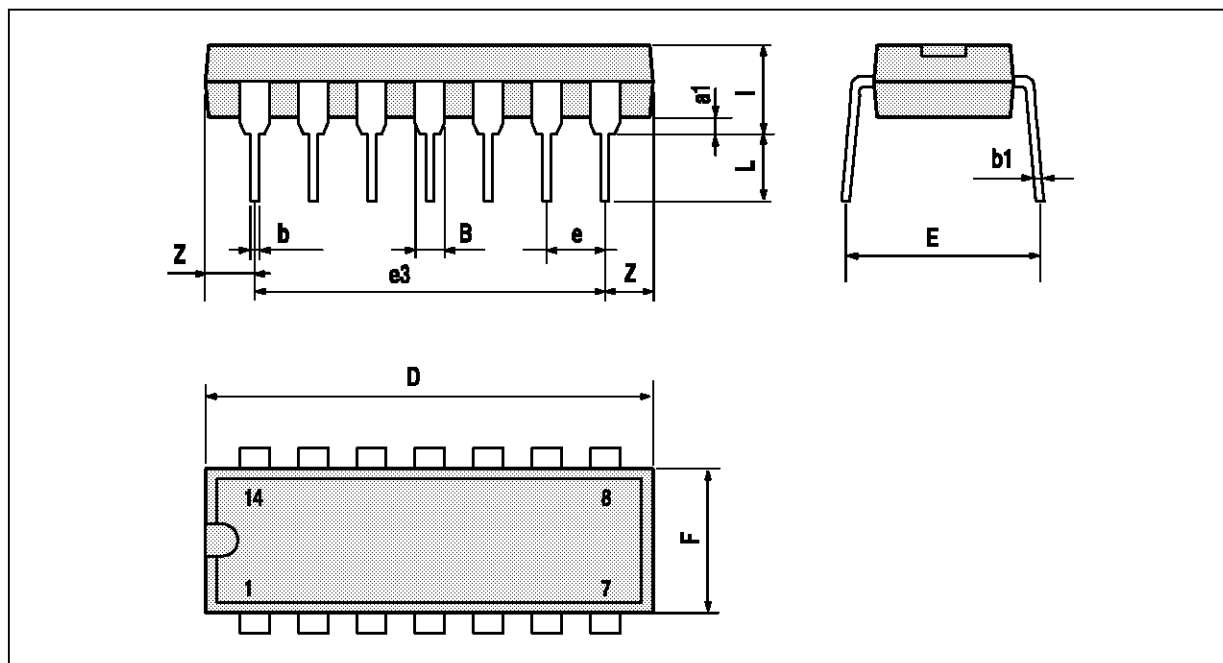


INPUT/OUTPUT PINS CONFIGURATION



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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