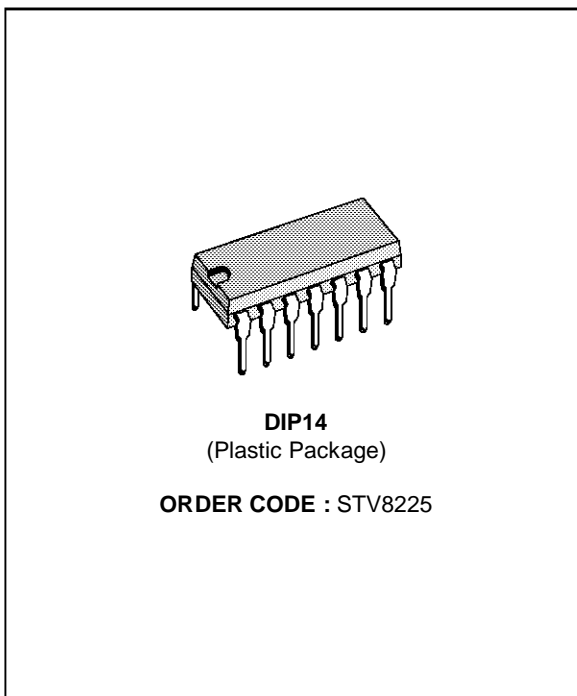


**AM SIF CIRCUIT**

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

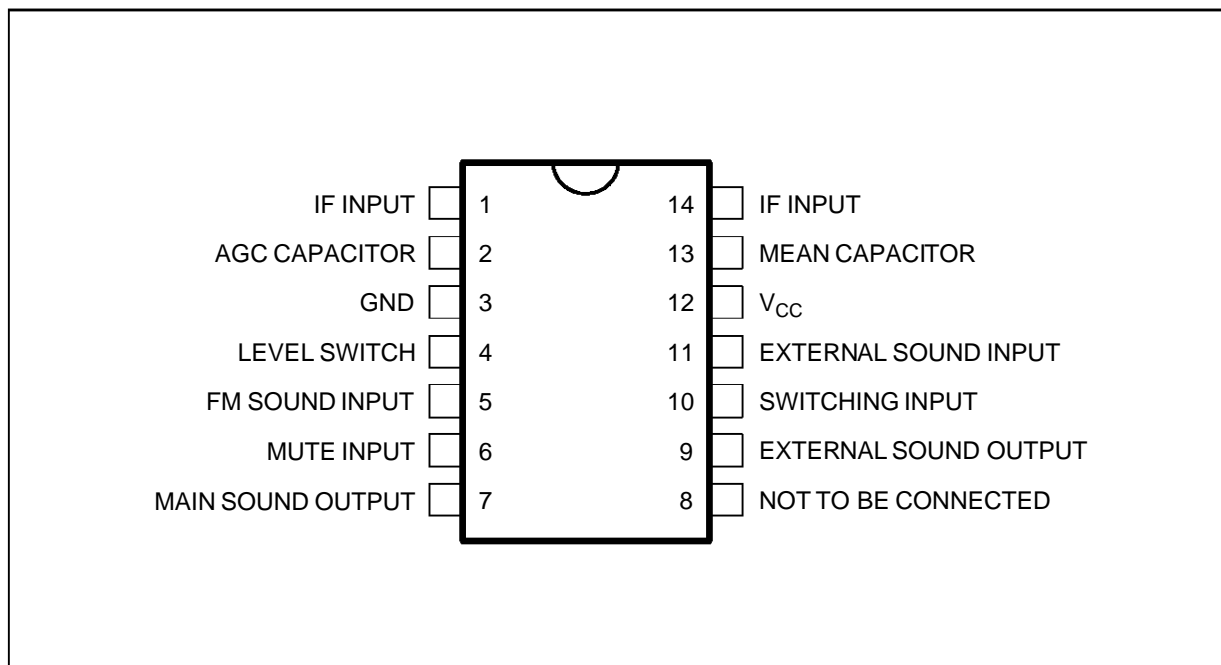


**DESCRIPTION**

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.

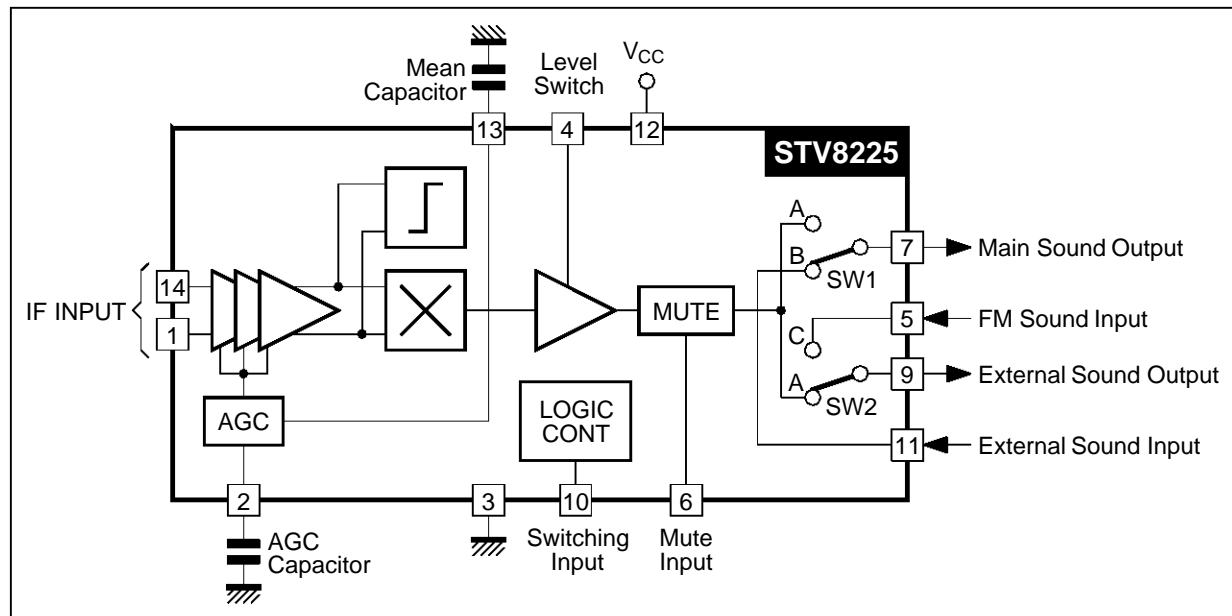
**PIN CONNECTIONS**



8225-01.EPS

# STV8225

## 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
VIF min	Minimum IF Input Signal	IF input signal for $V_{OUT} = V_{NOM} - 3dB$		70		$\mu V_{RMS}$
VIF max	Maximum IF Input Signal	IF input signal for $V_{OUT} = V_{NOM} + 1dB$		75		mV <sub>RMS</sub>
DAV	AGC Range	$DAV = VIF_{max} / VIF_{min}$		61		dB
$I_{AGC}$	Maximum AGC Output Current (Pin 2)	Charging and discharging	±35	±50	±65	μA
	IF Bandwidth	-3dB		50		MHz

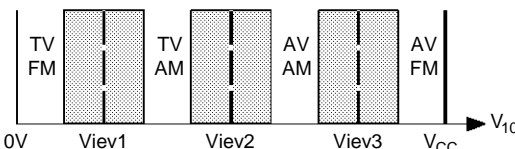
**ELECTRICAL CHARACTERISTICS** (continued) ( $V_{CC} = 9V$ ,  $V_{IN} = 10mV_{RMS}$ ,  $f_{SC} = 32.4MHz$ ,  $f_M = 1kHz$ ,  $m = 54%$  modulation depth, Audio BW = 40Hz to 15kHz,  $T_{amb} = 25^{\circ}C$ , unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
<b>AM DEMODULATOR</b>						
	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**

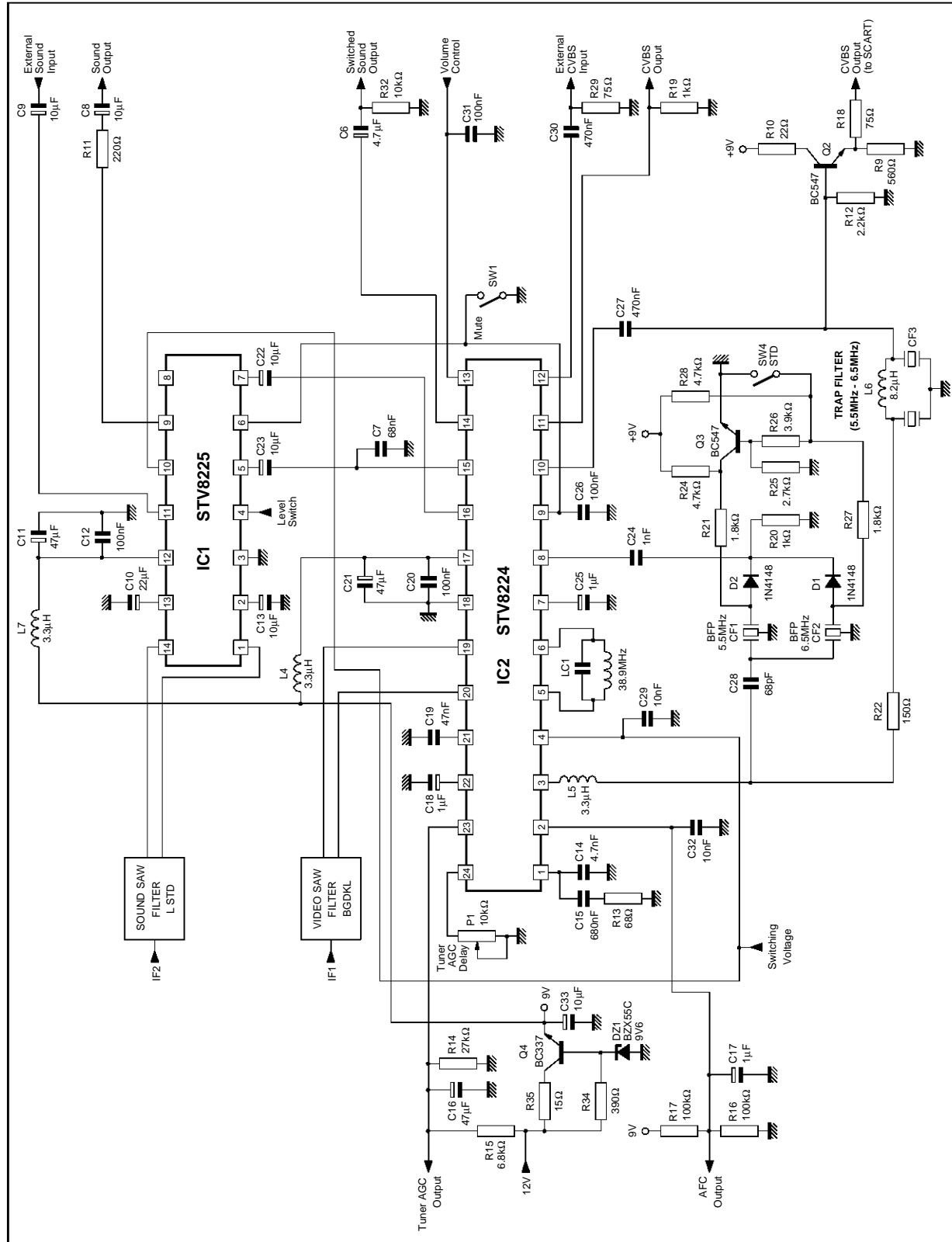
	Threshold Level (Pin 6)	Mute mode if voltage below threshold	0.2	0.3	0.4	V
	Attenuation (Pins 7-9)	Level switch (Pin 4) connected to GND TV - AM mode	80	96		dB

**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	$\mu A$
	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	$\Omega$
	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	$\mu Vp$
	DC Plop at AF Output Pin			10	50	mV

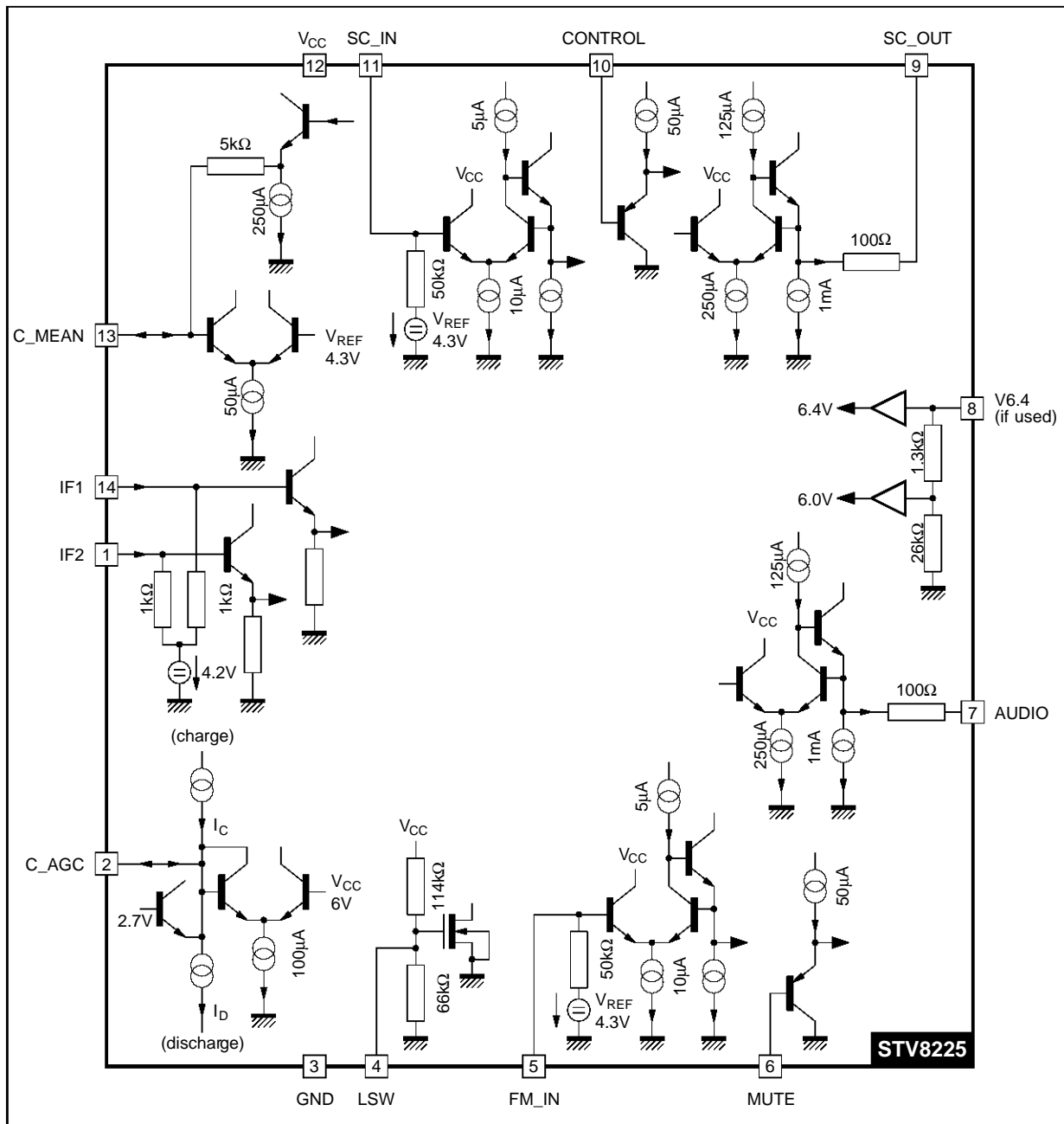
8225-03.EPS  
8225-04.TBL

APPLICATION DIAGRAM  
STV8224 - STV8225



8225-06.EPS

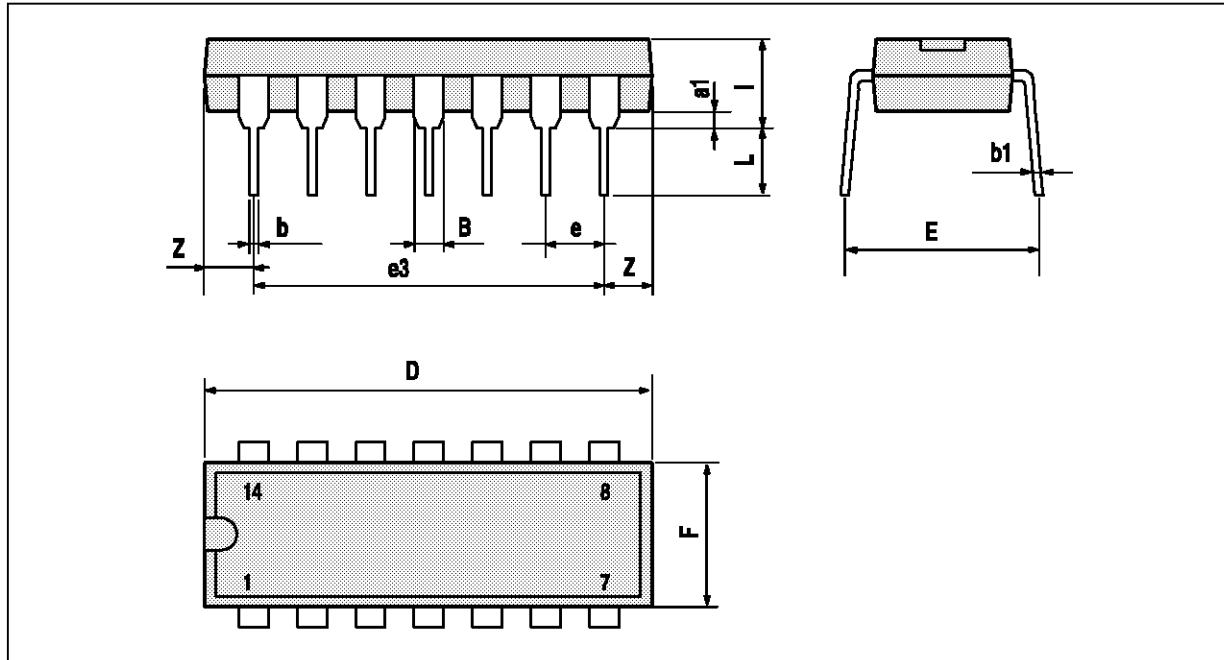
INPUT/OUTPUT PINS CONFIGURATION



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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