WaveFront™ Sounds (16M Bit CMOS Mask ROM)

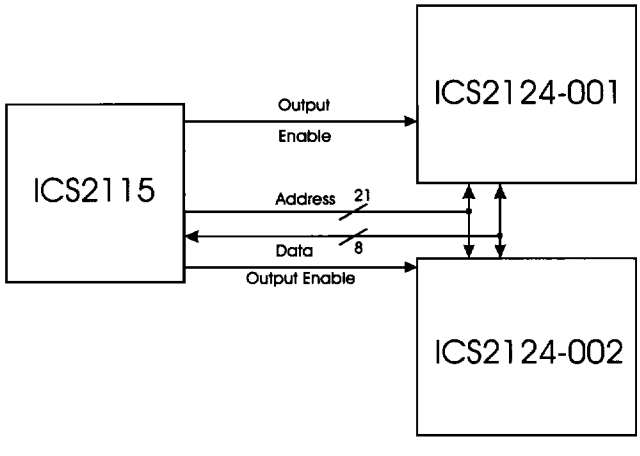
Description

WaveFront Sounds are masked ROMs that serve as the wavetable for the ICS2115 WaveFront Synthesizer. Each sound set, 4 MB, 2 MB and 512 KB, contains the musical data needed to synthesize the instruments from the General MIDI specification. The 4 MB sound set consists of two 2 MB ROMs, the **ICS2124M-001** and **ICS2124M-002**. The 2 MB sound set consists of one 2 MB ROM, the **ICS2122M-001**. The 512 KB sound set consists of one 512 KB ROM, the **ICS2125M-001**.

Features

- Complete set of General MIDI sounds, which contains 128 instruments and 69 drum sounds.
- Available in three sizes, 4 MB, 2 MB & 512 KB, to provide the optimal balance between price and performance for many applications.
- 16-bit linear wavetable (ICS2124-001/-002), compressed wavetable (ICS2122-001), or full-featured wavetable (ICS2125-001).
- Uses 2M x 8 MROMs in 44-pin SOP packages.

Block Diagram



4 MB Patch Set

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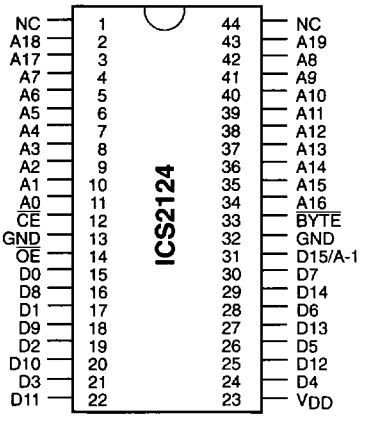
Pin Configuration



44-Pin SOP
K-8

Pin Descriptions

PIN NUMBER	PIN NAME	TYPE	DESCRIPTION
2-11, 34-43	A0-A19	I	Address Inputs
15-22, 24-30	D0-D14	O	Data Outputs
12	$\overline{CE}$	I	Chip Enable Input
14	$\overline{OE}$	I	Output Enable Input
31	D15/A-1	I/O	Data Output/Address Input
33	$\overline{BYTE}$	I	Word, Byte selection Input tied low for byte operation
23	V_{DD}	P	Power Supply
13, 32	GND	P	Ground
1, 44	NC	-	No Connection

Absolute Maximum Ratings

SYMBOL	ITEM	RATING	UNIT
V_{DD}	Power Supply Voltage	-0.5~7.0	V
V_{IN}	Input Voltage	-0.5~V_{DD}	V
V_{OUT}	Output Voltage	0~V_{DD}	V
P_D	Power Dissipation	1.0/0.6	W
T_{STG}	Storage Temperature	-55~150	°C
T_{OPR}	Operating Temperature	0~70	°C
T_{SOLDER}	Soldering Temperature · Time	260 · 10	°C · sec

AC Characteristics

T_A = 0~70°C, V_{DD}=5±10%

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS
Cycle Time	t_{CYC}	150	-	-	ns
Address Access Time	t_{ACC}	-	-	150	ns
Chip Enable Access Time	t_{CE}	-	-	150	ns
Output Enable Access Time	t_{OE}	-	-	70	ns
Output Disable Time from $\overline{CE}$	t_{CED}	-	-	40	ns
Output Disable Time from $\overline{OE}$	t_{OED}	-	-	40	ns
Output Hold Time	t_{OH}	5	-	-	ns

AC Test Conditions

Output Load: 100pf + 1TTL
Input Levels: 0.6V, 2.4V
Timing Measurement Reference Levels/Input: 0.8V, 2.2V
Timing Measurement Reference Levels/Output: 0.8V, 2.0V
Input Rise and Fall Time: 5ns

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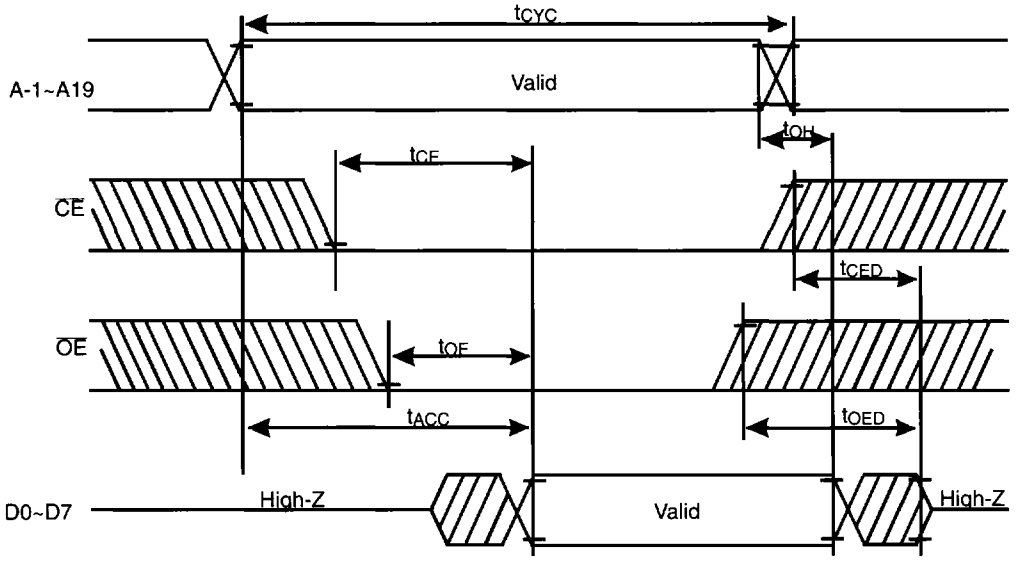
Timing Waveform

BYTE-WIDE READ MODE



Note: $\overline{BYTE}$=V_{IL}

Ordering Information

ICS2124-001M or ICS2124-002M

Example:

ICS XXXX-PPP M

Package Type
M=SOP

Pattern Number (2 or 3 digit number for parts with ROM code patterns)

Device Type (consists of 3 or 4 digit numbers)

Prefix
ICS, AV=Standard Device; GSP=Genlock Device