Supertex inc.

HV33

Preliminary

32 + 22 Channel Matrix Printhead Driver

Ordering Information

Device	Package Options			
	68 J - Lead Ceramic Quad Flatpack	68 J - Lead Plastic Quad Flatpack	Die	68 J - Lead Ceramic Quad Flatpack (MIL-STD-883 Processed*)
HV33	HV3304DJ	HV3304PJ	HV3304X	RBHV3304DJ

* For Hi-Rel process flows, please refer to page 5-3 in the Databook

Features

- Separate data (32) and strobe (22) outputs
- Independant CLK and BLK functions
- 4MHz opertation (either clock)
- Latched data outputs
- 68-pin QFP
- Mil version available

General Description

The HV33 is dual serial-to-parallel converter chip originally designed for driving printheads. Its dual converters have independent clock inputs and output blanking logic permitting considerable flexibility in driving small matrix arrays with one device.

Absolute Maximum Ratings

Supply voltage, V_{DD}		-0.5V to +7V
Supply voltage, V_{PD}		36V
Supply voltage, V_{PS}		36V
Logic input levels		-0.5V to V_{DD} + 0.5V
Continuous total power dissipation	Ceramic	1900mW
	Plastic	1200mW
Operating temperature range	Ceramic	-40°C to +85°C
	Plastic	0°C to +70°C
Storage temperature range		-65°C to +150°C

Electrical Characteristics (over recommended operating conditions unless noted)

DC Characteristics

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Symbol	Parameter	Min	Typ	Max	Units	Conditions
I_{DD}	V_{DD} Supply Current			25	mA	f_{CLK} = 4MHz, f_{DATA} = 2MHz
I_{DDQ}	Quiescent V_{DD} Supply Current			0.25	mA	All V_{IN} = 0V
I_{PP}	High Voltage Supply Current			0.5	mA	Output High and Low
V_{OH}	High-Level Data Out			36	V	I_{OUT} = 4mA
I_{IH}	High-Level Input Current			10	µA	V_{IN} = High
I_{IL}	Low-Level Input Current	-10			µA	V_{IN} = 0V

AC Characteristics

Symbol	Parameter	Min	Typ	Max	Units	Conditions
f_{CLK}	Clock Frequency			4	MHz	
t_W	Clock Width High or Low	125			ns	
t_{SU}	Data Setup Time Before Clock Falls	50			ns	
t_H	Data Hold Time After Clock Falls	20			ns	
t_{DHVS}	Delay from -SBL to HV Strobe			2	µs	250 pF Load
t_{DHVD}	Delay from SCLK/DL to HV Date			2	µs	250 pF Load

Functional Block Diagram