

ICS527-03/04 Demo Board

The ICS527-03/04 demo board provides a way to quickly evaluate the performance of the ICS525-03 and ICS527-04 Clock Slicer User Configurable PECL Input Zero Delay Buffers.

Power

Connect 3.3 across the VDD and GND header pins.

Frequency Selection

The output frequency can be changed by setting switches SW1 and SW2 according to the instructions in datasheet. Alternatively, shunts can be soldered to the appropriate 0604 device landings underneath the SWs. Turning on a switch or stuffing a shunt will pull that particular input low. Opening the switch or removing the shunt will allow the on-chip pull-up resistors to take the signal high

Devices Supported

The ICS527-03/04 Demo Board supports either an ICS527-03 (CLK in, PECL out) or a ICS527-04 (PECL in, PECL out) device. All silk-screen labels are common to both devices unless qualified with either a “-03” or “-04”.

Component	ICS527-03	ICS527-04
CN4	open	SMA Connector
R12	open	68 ohm
R13	short	open
R14	50 ohm	180 ohm
R16	open	68 ohm
R17	open	180 ohm

On-board versus Off-board Feedback

The ICS527-03/04 Demo Board supports either on-board and off-board feedback.

Component	On-board Feedback	Off-board Feedback
CN1	open	SMA Connector
CN2	open	SMA Connector
R1	open	68 ohm
R3	open	short
R4	open	180 ohm
R6	open	68 ohm
R8	open	short
R9	open	180 ohm

Use CN1 and CN2 as the feedback inputs for off-board feedback mode. For best performance in off-board feedback mode, cut the traces to pins 7 and 8 beneath the ICS527 device.

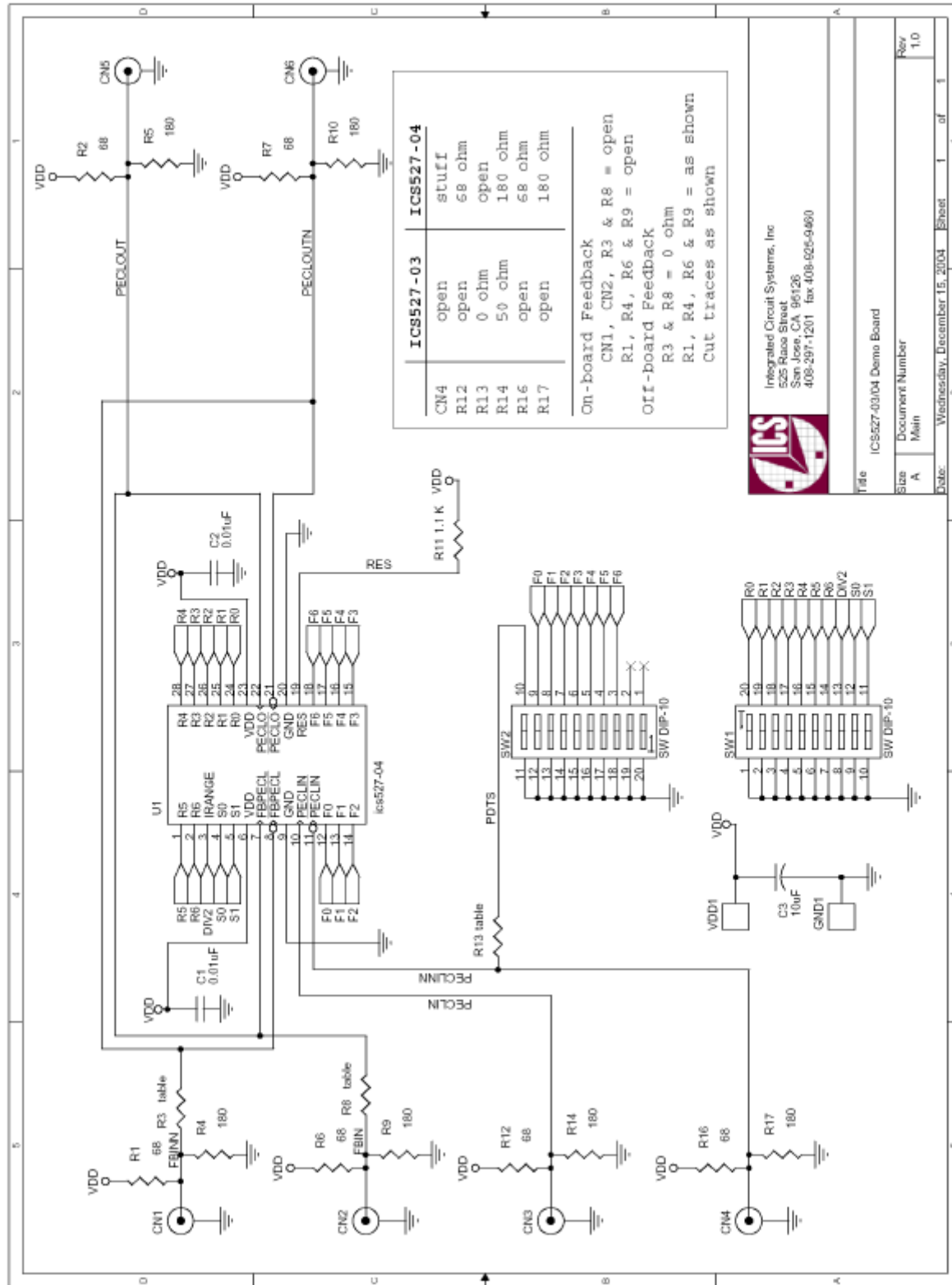
Output Termination

The resistor pair R2 and R5 as well as the pair R7 and R10 serve as PECL output termination resistors. The parallel combination of these values typically matches the PCB trace impedance. See the document <http://www.icst.com/appnotes/man09.pdf> for more information on selecting termination resistor values.

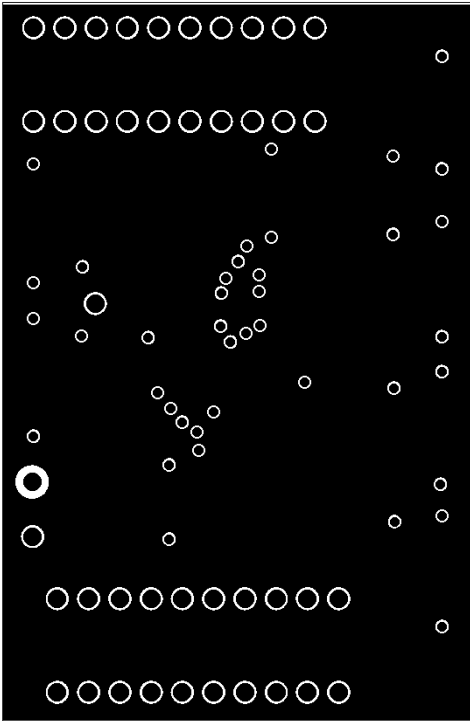
Trace Impedance

The ICS527-03/04 board has controlled impedance traces of 50 ohms for all clock inputs and outputs.

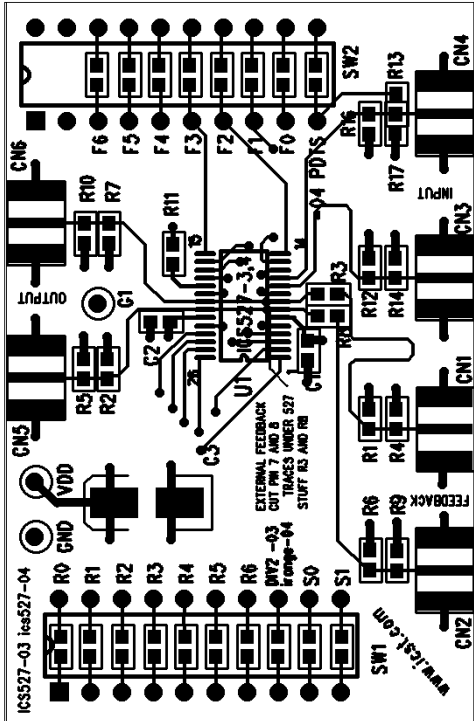
Demo Board Schematics



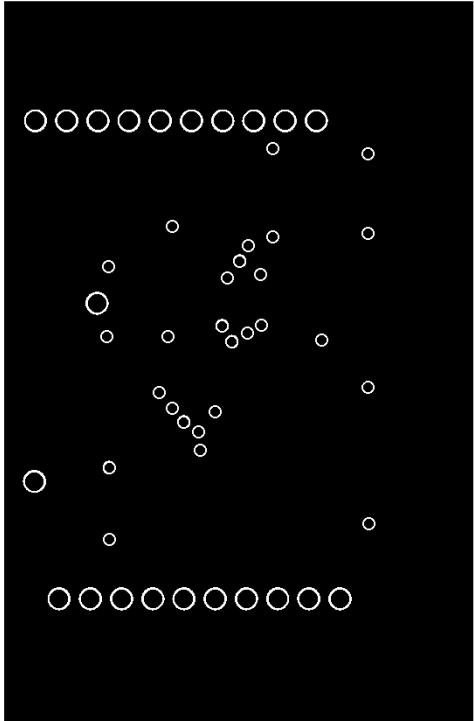
PCB Power Plane



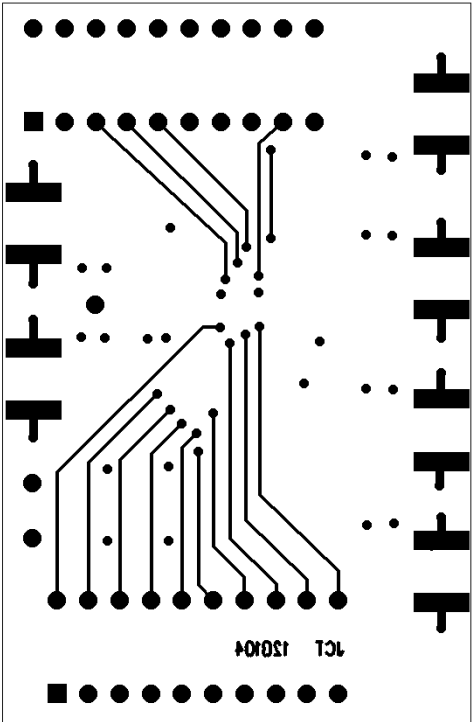
PCB Top



PCB Ground Plane



PCB Bottom



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