

Features

- 5V and 3.3V Line Clamping
- Near Zero Quiescent Supply Current: 10μA Maximum
 - Active circuit clamping
- Low Capacitance: 5pF (typ.)
- High 4kV ESD Protection
- Packaging (Pb-free & Green Available):
 - 6-pin SC70 (C)

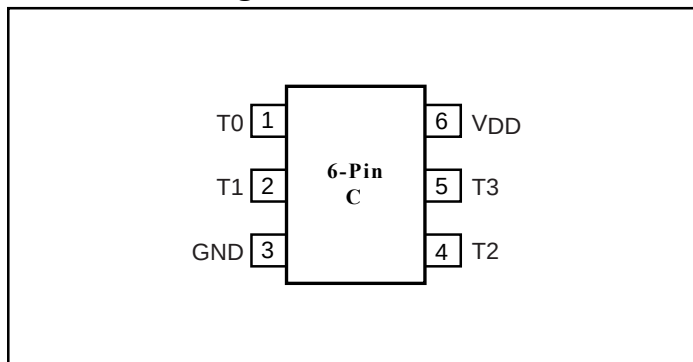
Benefits

- Reduced EMI
 - Limits high-frequency ring voltage
- Minimum Power Consumption
- Higher Noise Margin
- Minimal Line Loading

Applications

- CPU Termination
- Backplane Termination
- Termination

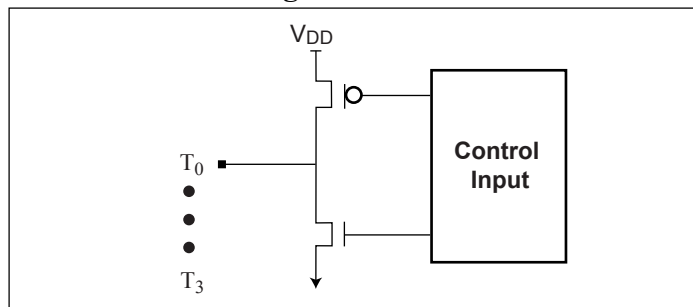
Product Pin Configuration



Product Pin Description

Pin Number	Name	Description
6-pin, SC70		
1	T0	Line Termination
2	T1	Line Termination
4	T2	Line Termination
5	T3	Line Termination
3	GND	Ground
6	VDD	Positive Supply Voltage

Functional Block Diagram



Absolute Maximum Ratings

DC Voltage on Any Pin	6.5V
Storage Temperature	−65°C to 150°C
Lead Temperature (Soldering, 10 seconds)	300°C
Thermal Information	
MSOP Continuous Power Dissipation: derate 8.7mW/°C above 70°C)	650mW
SC70/SOT23 Continuous Power Dissipation: derate 7.0mW/°C above 70°C)	550mW

Electrical Characteristics

$V_{DD} = 5V$ Over Operating Temperature Range, unless otherwise noted.

Parameter	Symbol	Conditions	Temp	Min.	Typ	Max.	Units
Line Signal Voltage Above V_{DD}		Note 2			0.6		V
Line Signal Voltage Below GND		Note 2			−0.6		
Input Line Capacitance	C_I	Line Voltage = V_{DD}	25		5		pF
Input High Current	I_{IH}	$V_{LINE} = V_{DD}$, $V_{DD} = 5.5V$				5	μA
Input Low Current	I_{IL}	$V_{LINE} = 0V$, $V_{DD} = 5.5V$				5	
Supply Voltage Range	V_{DD}			4.5		5.5	V
Quiescent Supply Current	I_{DD}	All lines floating				20	μA
ESD Protection		MIL-STD-883, Method 3015			4		kV

$V_{DD} = 3.3V$ Over Operating Temperature Range, unless otherwise noted.

Parameter	Symbol	Conditions	Temp	Min.	Typ.	Max.	Units
Line Signal Voltage Above V_{DD}		Note 2			0.6		V
Line Signal Voltage Below GND		Note 2			−0.6		
Input Line Capacitance	C_I	Line Voltage = V_{DD}	25		5		pF
Input High Current	I_{IH}	$V_{LINE} = V_{DD}$, $V_{DD} = 3.6V$				3	μA
Input Low Current	I_{IL}	$V_{LINE} = 0V$, $V_{DD} = 3.6V$				3	
Supply Voltage Range	V_{DD}			3.0		3.6	V
Quiescent Supply Current	I_{DD}	All lines floating				20	μA
ESD Protection		MIL-STD-883, Method 3015			4		kV

Notes:

1. Capacitance and ESD parameters are guaranteed by design.
2. Maximum line voltage clamped during a transient.

Application Information

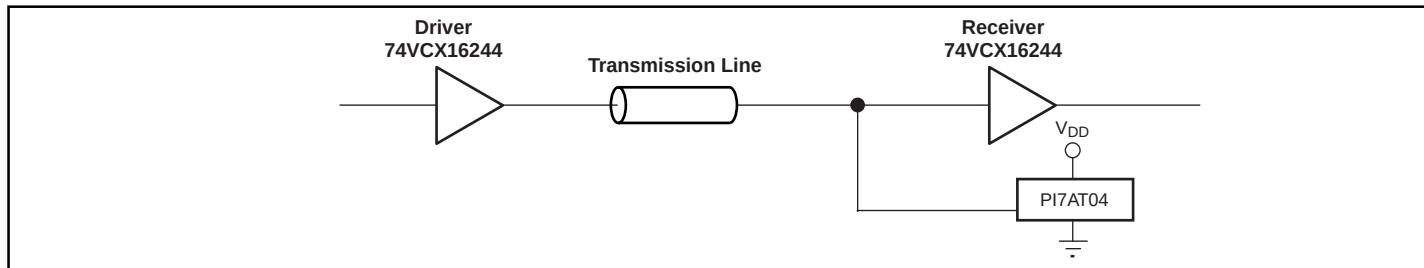


Figure 1. Test Diagram

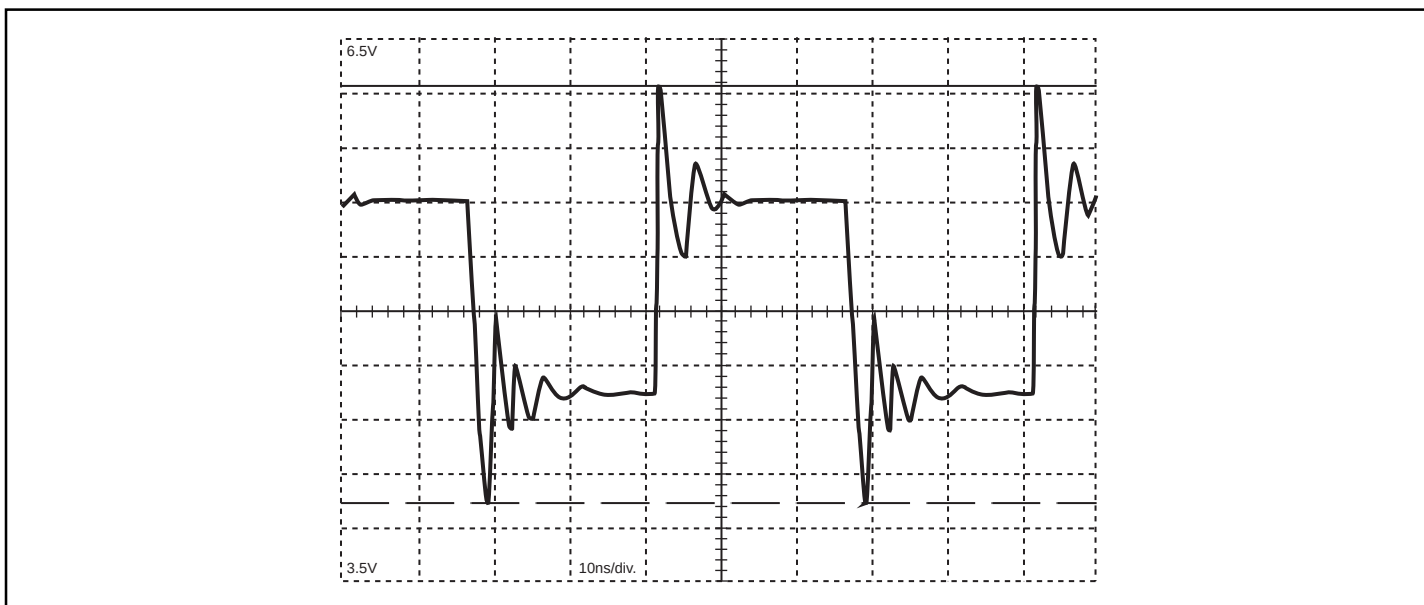


Figure 2. VCX16244 (V_{CC} = 3.6V) output after driving 3-inch transmission line. Signal capture at end of line

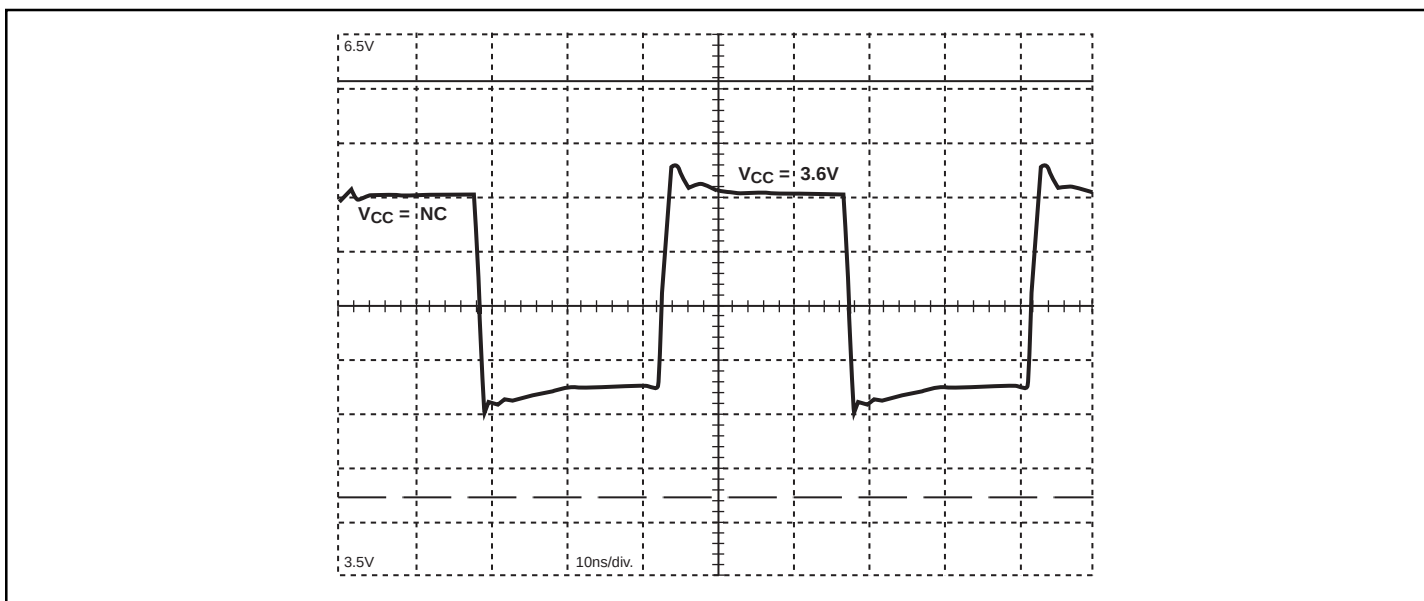
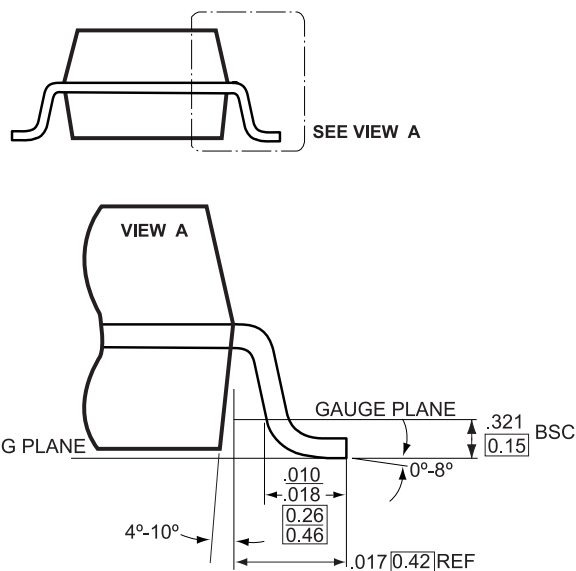


Figure 3. VCX16244 (V_{CC} = 3.6V) output after driving 3-inch transmission line and driving PI7AT04 input. Signal as seen at the input pin. Signal capture when V_{CC} in NC, V_{CC} = 3.6V.

Technical drawing of a rectangular component with six pins. The top view shows a central rectangle with six pins (1-6) around it. Dimensions include overall width of .079 BSC, overall height of .083 BSC, and pin spacing of .026 BSC. The side view shows a maximum height of .043 and a seating plane. Material is 304 Stainless Steel.

Notes:
1) Controlling dimensions in millimeters
2) Ref: JEDEC MO-203AB



Ordering Code	Line Terminations	Package Code	Package Description	Top Marking
PI7AT04CX	4	C	6-pin SC70	Z9
PI7AT04CEX	4	C	6-pin SC70	$\overline{Z}9$

1. Thermal Characteristics can be found on the world wide web at www.pericom.com/packaging/
2. X = Tape and reel