

Part #

▼ TS3USB221RSER

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## TS3USB221RSER Datasheet (PDF) - Texas Instruments

www.ti.com

**Dynamic Electrical Characteristics**over operating range,  $T_A = -40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ ,  $V_{CC} = 2.5\text{ V} \pm 10\%$ ,  $\text{GND} = 0\text{ V}$ 

PARAMETER		TEST CONDITIONS
$X_{\text{TALK}}$	Crosstalk	$R_L = 50\ \Omega$ , $f = 250\text{ MHz}$
$O_{\text{IRR}}$	OFF isolation	$R_L = 50\ \Omega$ , $f = 250\text{ MHz}$
BW	Bandwidth ( $-3\text{ dB}$ )	$R_L = 50\ \Omega$

(1) For Max or Min conditions, use the appropriate value specified under Electrical Characteristics

**Switching Characteristics**over operating range,  $T_A = -40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ ,  $V_{CC} = 3.3\text{ V} \pm 10\%$ ,  $\text{GND} = 0\text{ V}$ 

PARAMETER		TEST CONDITION
$t_{\text{pd}}$	Propagation delay <sup>(2)(3)</sup>	
$t_{\text{ON}}$	Line enable time,	SEL to D, nD
$t_{\text{OFF}}$	Line disable time,	SEL to D, nD
$t_{\text{ON}}$	Line enable time,	$\overline{\text{OE}}$ to D, nD
$t_{\text{OFF}}$	Line disable time,	$\overline{\text{OE}}$ to D, nD
$t_{\text{SK(O)}}$	Output skew between center port to any other port <sup>(2)</sup>	
$t_{\text{SK(P)}}$	Skew between opposite transitions of the same output ( $t_{\text{PHL}} - t_{\text{PLH}}$ ) <sup>(2)</sup>	

(1) For Max or Min conditions, use the appropriate value specified under Electrical Characteristics

(2) Specified by design

(3) The bus switch contributes no propagational delay other than the RC delay of the on resistance. The time constant for the switch alone is of the order of 0.25 ns for 10-pF load. Since this time is much less than the times of typical driving signals, it adds very little propagational delay to the system. Propagation delay in a system, is determined by the driving circuit on the driving side of the switch and its interaction with the load.

**Switching Characteristics**over operating range,  $T_A = -40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ ,  $V_{CC} = 2.5\text{ V} \pm 10\%$ ,  $\text{GND} = 0\text{ V}$ 

PARAMETER		TEST CONDITION
$t_{\text{pd}}$	Propagation delay <sup>(2)(3)</sup>	

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Manufacturer



Part #

TS3USB221RSER

Datasheet



1Mb / 20P

Description

HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE

**TS3USB221RSEK**

1Mb / 27P

Enable

**TS3USB221RSEK4**

1Mb / 20P

HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE

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## Similar Description - TS3USB221RSEK

Manufacturer	Part #	Datasheet	Description
 Texas Instruments	<b>TS3USB30</b>	 311Kb / 12P	HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE
	<b>TS3USB30</b>	 770Kb / 18P	HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE
	<b>TS3USB30E</b>	 705Kb / 15P	ESD PROTECTED, HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE
	<b>TS3USB221A</b>	 730Kb / 16P	ESD PROTECTED, HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE
	<b>TS3USB221</b>	 1Mb / 20P	HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE
	<b>TS3USB30</b>	 892Kb / 19P	HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE
	<b>TS3USB221</b>	 1Mb / 20P	HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE
	<b>TS3USB30E</b>	 1Mb / 20P	ESD PROTECTED, HIGH-SPEED USB 2.0 (480-Mbps) 1:2 MULTIPLEXER/DEMULTIPLEXER SWITCH WITH SINGLE ENABLE
 Global Mixed-mode Techn...	<b>G3206</b>	 91Kb / 1P	High-Speed USB 2.0 (480-Mbps) 1:2 Multiplexer Demultiplexer Switch with Single Enable
 Texas Instruments	<b>TS3USB221</b>	 1Mb / 27P	High-Speed USB 2.0 (480-Mbps) 1:2 Multiplexer ??Demultiplexer Switch With Single Enable

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