

Rad-hard, 16-bit transceiver, 3.3 to 1.6 V level shifter

Data brief


Description

The 54VCXH163245 is a rad-hard advanced high-speed CMOS, Schmitt trigger 16-bit bidirectional multi-purpose transceiver with 3-state outputs and cold sparing.

Designed for use as an interface between a 3.3 V bus and a 1.8 V bus in mixed 3.3 V/1.8 V supply systems, it achieves high-speed operation while maintaining the CMOS low power dissipation.

All pins have cold spare buffers to change them to high impedance when V_{DD} is tied to ground.

This IC is intended for two-way asynchronous communication between data buses and the direction of data transmission is determined by the nDIR inputs.

Table 1: Device summary

Parameter	RHFXH163245K1	RHFXH163245K01V
SMD	—	5962F1120701VXC
Quality level	Engineering model	QML-V flight
Package	Flat-48	
Lead finish	Gold	
Mass	1.50g	
EPPL	—	
Temperature range	Operating: -55 °C to 125 °C (ambient temperature)	
	AMR: $T_{jmax} = 150$ °C (junction temperature)	

Features

- Dual supply bidirectional level shifter
- Voltage range from 3.3 V to 1.6 V
- Separated enable pin for 3-state output
- Internal 26 Ω limiting resistor on each I/O
- Bus hold
- Cold spare
- Hermetic package
- 300 krad (Si) at any Mil1019 dose rate
- SEL immune to 110MeV.cm²/mg LET ions
- QML-V qualification on going

1 Ordering information

Table 2: Order codes

Order code	Description	Temperature range	Package	Marking	Packing
RHFXH163245K1	Engineering model	-55 °C to 125 °C	Flat-48	RHFXH163245K1	Conductive strip pack
RHFXH163245K01V	QML-V flight			5962F1120701VXC	

Note: contact your ST sales office for information on the specific conditions for products in die form.

INACTIVE - INACTIVE - INACTIVE

2 Revision history

Table 3: Document revision history

Date	Revision	Changes
23-Sep-2011	1	Initial release.
26-Jan-2012	2	Modified title on cover page. Modified Table 1: Device summary on cover page. Added Table 2: Order codes.
26-Oct-2015	3	Modified document title <i>Features</i> : removed fail safe feature which is not applicable on this product. <i>Table 1: "Device summary"</i> : updated information, re-organized layout, removed note beneath table to <i>Section 1: "Ordering information"</i> <i>Table 2: "Order codes"</i> : updated information

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