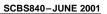
## RI-TRP-RE2B, RI-TRP-WE2B



# **ECO-LINE** LOW-FREQUENCY 32mm GLASS TRANSPONDER

#### **FEATURES**

- Best in Class performance Through Patented HDX Technology
- Patented Transponder Tuning Provides Stable and High Read/Write Performance
- 64-bit Read Only and 80-bit Read/Write bit types are available
- ISO 11784/11785 Compliant

TRUMENTS www.ti.com

**Insensitive to Almost All Nonmetallic** Materials

#### APPLICATIONS

- Access Control
- **Vehicle Identification**
- **Container Tracking**
- Asset Management
- Waste Management



### DESCRIPTION

Texas Instruments' 32 mm LF transponders are providing superior performance and operate at a resonance frequency of 134.2 kHz. Specific products are compliant to ISO/IEC 11784/11785 global open standards. Texas Instruments LF transponders are manufactured with TI's patented tuning process to provide consistent read and write performance. Prior to delivery, the transponders undergo complete functional and parametric testing, in order to provide the high quality customers have come to expect from TI. The transponder is well suited for usage in a broad range of applications including, but not limited to, access control, vehicle identification, container tracking, asset management and waste management applications.

#### ABSOLUTE MAXIMUM RATINGS<sup>(1)</sup>

over operating free-air temperature range (unless otherwise noted)

	RI-TRP-RE2B	RI-TRP-WE2B	UNIT
Operating Temperature (Read)	-25 to +70	-25 to +70	°C
Operating Temperature (Program)	—	-25 to +70	°C
Storage Temperature	-40 to +85	-40 to +85	°C

(1) Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under Recommended Operating Conditions is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.



Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet. TI-RFid is a trademark of Texas Instruments.

SCBS840-JUNE 2001

#### **OPERATING CHARACTERISTICS**

over operating free-air temperature range (unless otherwise noted)

PARAMETER	P	UNIT		
	RI-TRP-RE2B	RI-TRP-WE2B		
Functionality	Read Only	Read/Write		
Memory (Bits)	64	80 <sup>(1)</sup>		
Memory (Pages)	1	1		
Operating Frequency	134.2	134.2		
Modulation	FSK (Frequency Shift Keying) 13	FSK (Frequency Shift Keying) 134.2 kHz / 123.2 kHz		
Transmission Principle	HDX (Half Duplex)	HDX (Half Duplex)		
Power Source	Powered from the reader signal	Powered from the reader signal (batteryless)		
Typical Reading Range	≤ 100 <sup>(2)</sup>	≤ 100 <sup>(2)</sup>		
Typical Programming Range		30% of specified reading range		
Typical Read Time	70	70		
Typical Programming Time	-	309	ms	
Typical Programming Cycles	—	10,000		
Case Material	Glass	Glass		
Protection Class	Hermetically sealed	Hermetically sealed		
EMC	Programmed code is not affecter x-rays	Programmed code is not affected by normal electromagnetic interference or x-rays		
Signal Penetration	Transponder can be read throug	Transponder can be read through virtually all non-metallic material		
Mechanical Shock	IEC 68-2-27, Test Ea;	IEC 68-2-27, Test Ea;		
Vibration	IEC 68-2-6, Test Fc;	IEC 68-2-6, Test Fc;		
Dimensions	$\varnothing 3.85 \pm 0.05 \times 31.2 \pm 0.6$	$\varnothing{3.85}\pm0.05\times31.2\pm0.6$		
Weight	0.8	0.8		

We recommend that you split each 80 bit page into 64 user programmable bits plus a 16 bit wide CRC CCITT Block Check Character as is done by TI-RFid<sup>™</sup> LF readers.
Depending on RF regulation in country of use, the Reader Antenna configuration used, and the environmental conditions.

#### **IMPORTANT NOTICE**

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

Products		Applications	
Amplifiers	amplifier.ti.com	Audio	www.ti.com/audio
Data Converters	dataconverter.ti.com	Automotive	www.ti.com/automotive
DSP	dsp.ti.com	Broadband	www.ti.com/broadband
Interface	interface.ti.com	Digital Control	www.ti.com/digitalcontrol
Logic	logic.ti.com	Military	www.ti.com/military
Power Mgmt	power.ti.com	Optical Networking	www.ti.com/opticalnetwork
Microcontrollers	microcontroller.ti.com	Security	www.ti.com/security
Low Power Wireless	www.ti.com/lpw	Telephony	www.ti.com/telephony
		Video & Imaging	www.ti.com/video
		Wireless	www.ti.com/wireless

Mailing Address:

Texas Instruments

Post Office Box 655303 Dallas, Texas 75265

Copyright © 2007, Texas Instruments Incorporated