12-mm LOW-FREQUENCY GLASS-ENCAPSULATED TRANSPONDER, CCT

Check for Samples: TRPGP40TGC

FEATURES

- **Best-in-Class Performance Through Patented HDX Technology**
- **Patented Transponder Tuning Provides Stable and High Read Performance**
- **80-Bit Customer-Configurable Transponder (CCT) Type**
- **Insensitive to Almost All Nonmetallic Materials**

APPLICATIONS

- **Animal ID**

DESCRIPTION

Texas Instruments 12-mm low-frequency (LF) glass transponders provide superior performance and operate at a resonance frequency of 134.2 kHz. The products are compliant to ISO/IEC 11784/11785 global open standards. Texas Instruments LF glass transponders are manufactured with TI's patented tuning process to provide consistent read performance. Prior to delivery, the transponders undergo complete functional and parametric testing, to provide the high quality customers have come to expect from TI.

ORDERING INFORMATION

T_A	PACKAGE(1)		ORDERABLE PART NUMBER	QUANTITY
-25°C to 85°C	Glass encapsulated	Container/Bulk	TRPGP40TGC	2000

(1) For the most current package and ordering information, see the TI web site at www.ti.com.

ABSOLUTE MAXIMUM RATINGS

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

		TRPGP40TGC
T_A	Operating temperature	-25°C to 70°C
T_{STG}	Storage temperature	-40°C to 100°C

PARAMETER	TRPGP40TGC
Functionality	Not programmed
Memory (bits)	80
Memory (pages)	1
Resonance frequency	134.6 kHz
Modulation	FSK (frequency shift keying) 134.2 kHz / 124.2 kHz
Transmission principle	HDX (half duplex)
Power source	Powered from the reader signal (battery-less)
Typical reading range	≤60 cm (1)
Typical reading time	70 ms
Case material	Glass
Protection glass	Hermetically sealed
EMC	Programmed code is not affected by natural electromagnetic interference or x-rays
Signal penetration	Transponder can be read through almost all nonmetallic material
Mechanical shock	IEC 60068-2-32 free-fall drop test, 20 times from 1.5-m height
Dimensions	Ø 2.12 ± 0.05 mm x 12.0 ± 0.5 mm
Weight	0.10 g

(1) Depends on RF regulation in country of use, the reader antenna configuration used, and the environmental conditions.

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/ Ball Finish	MSL Peak Temp (3)	Samples (Requires Login)
TRPGP40TGC	ACTIVE	RFIDT	TGC	0	2000	TBD	Call TI	Call TI	

(1) The marketing status values are defined as follows:
ACTIVE: Product device recommended for new designs.
LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.
NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.
PREVIEW: Device has been announced but is not in production. Samples may or may not be available.
OBSOLETE: TI has discontinued the production of the device.

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check http://www.ti.com/productcontent for the latest availability information and additional product content details.
TBD: The Pb-Free/Green conversion plan has not been defined.
Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.
Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.
Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

(3) MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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