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TEF6906H

Integrated RDS/TMC receiver

Devices listed on this page should not be used for new designs!

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Overview | Package / Packing | Quality | Documentation | Design support | **Show all**

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The TEF6906 is a single-chip car radio integrated circuit with FM tuner, featuring a Radio Data System (RDS)/Radio Broadcast Data System (RBDS) demodulator for radio data reception. Main focus of TEF6906 is reception of Traffic Message Channel (TMC) messages for navigation devices via RDS or RBDS. Demodulated FM Multiplex (MPX) signal is available at external pins for optional support of other FM subcarrier systems by an external device, e.g. for DAta Radio Channel (DARC) or Vehicle Information and Communication System (VICS). Japanese FM band is fully supported. TEF6906 facilitates search functions for operation as background tuner. During Alternative Frequency (AF) jumps, signal quality like FM deviation and UltraSonic Noise (USN) can be measured to determine whether alternate frequency is suitable as a new frequency for a primary audio tuner, such as TEF6901A. TEF6906 features a fully integrated FM tuner with double conversion to IF1 = 10.7 MHz and IF2 = 450 kHz with integrated image rejection for both IF1 and IF2. Integrated channel filter with variable bandwidth control is provided, supporting US FM, Europe FM, Japan FM and Eastern Europe FM. The device can be controlled via the fast-mode I2C-bus (400 kHz) and includes autonomous tuning functions for easy control without microcontroller timing. No manual alignments are required. The device is pin compatible and functionally compatible to other TEF690x series devices. However, AM reception and audio processing are not supported on this device.

Features and benefits

- FM Radio Frequency (RF) front-end with large dynamic range
- RDS/RBDS radio data demodulator
- Optional MPX output
- Integrated FM channel filter with controlled bandwidth
- Low phase noise local oscillator
- In-lock detection for optimized adaptive Phase-Locked Loop (PLL) tuning speed
- Crystal oscillator reference with low harmonics
- Sequential state machine for autonomous support of tuning action like AF jumps
- Signal quality detection [FM deviation, USN, Radio Signal Strength Information (RSSI), adjacent channel] for support of AF searches as background tuner

Applications

- Analog car radio

All information on this product information page is subject to the subsequent disclaimers:
General product disclaimer
Quality and reliability disclaimer

Package

All type numbers in the table below are discontinued. See the table Discontinuation information at the bottom of this page for more information.

Type number	Package	Outline version	Reflow-/Wave soldering	Packing	Product status	Marking	Orderable part number, (Ordering code (12NC))
		⬇ sot393	⬇ sot393-1_fr	Reel Dry Pack, SMD	Withdrawn	Standard	TEF6906HA/1,518

TEF6906H/V1 QFP64 (SOT393-1)	⤓ sot393-1_po	⤓ QFP-SQFP-TQFP-WAVE	Reel Dry Pack, SMD, 13" Q1/T1	**Replacement product**	Standard Marking	TEF6906H/V1,518 (9352 861 63518)
TEF6906H/V2S QFP64 (SOT393-1)	⤓ sot393-1_po	⤓ sot393-1_fr ⤓ QFP-SQFP-TQFP-WAVE	Tray Dry Pack, Bakeable, Multiple	Discontinued **Replacement product**	Standard Marking	TEF6906H/V2S,557 (9352 888 26557)
			Reel Dry Pack, SMD, 13" Q1/T1	Discontinued **Replacement product**	Standard Marking	TEF6906H/V2S,518 (9352 888 26518)

Discontinuation information

Type number	Ordering code (12NC)	Last-time buy date	Last-time delivery date	Replacement product	DN Notice	Status	Comments
TEF6906H/V1	935286163518	3-okt-09	3-apr-10	TEF6906H/V2S	DN 63	Sole source product Limited availability (check with your usual sales contact)	FAB ICH Closure. Refer to CIN200810022I dated November 5, 2008.
TEF6906H/V2S	935288826557	30-Sep-14	31-Dec-14	No replacement	DN NXP-DN_201312028DN	Full Withdrawal	
TEF6906H/V2S	935288826518	30-Sep-14	31-Dec-14	No replacement	DN NXP-DN_201312028DN	Full Withdrawal	

Quality, reliability & chemical content

All type numbers in the table below are discontinued. See the table Discontinuation information at the bottom of this page for more information.

Type number	Orderable part number	Chemical content	RoHS / RHF	Leadfree conversion date	MSL	MSL LF
TEF6906H/V1	TEF6906H/V1,518	Not available	EU/CN RoHs COMPLIANT Pb G	Always Pb-free	3	3
TEF6906H/V2S	TEF6906H/V2S,557	TEF6906H/V2S	EU/CN RoHs COMPLIANT Pb D	Always Pb-free	3	3
TEF6906H/V2S	TEF6906H/V2S,518	TEF6906H/V2S	EU/CN RoHs COMPLIANT Pb D	Always Pb-free	3	3

▶ Quality and reliability disclaimer

Discontinuation information

Type number	Ordering code (12NC)	Last-time buy date	Last-time delivery date	Replacement product	DN Notice	Status	Comments
TEF6906H/V1	935286163518	3-okt-09	3-apr-10	TEF6906H/V2S	DN 63	Sole source product Limited availability (check with your usual sales contact)	FAB ICH Closure. Refer to CIN200810022I dated November 5, 2008.
TEF6906H/V2S	935288826557	30-Sep-14	31-Dec-14	No replacement	DN NXP-DN_201312028DN	Full Withdrawal	
TEF6906H/V2S	935288826518	30-Sep-14	31-Dec-14	No replacement	DN NXP-DN_201312028DN	Full Withdrawal	

Documentation for this product

⤓ :: Download all documentation (zip)

File name	Title		Type	Format	Date
⤓ QFP-SQFP-TQFP-WAVE	Footprint for wave soldering	★	Wave soldering	pdf	2009-10-08
⤓ sot393-1_fr	Footprint for reflow soldering SOT393-1	★	Reflow soldering	pdf	2009-10-08
⤓ sot393-1_po	plastic quad flat package; 64 leads (lead length 1.6 mm); body 14 x 14 x 2.7 mm	★	Outline drawing	pdf	2009-10-08

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