

Si47971-72 Data Short

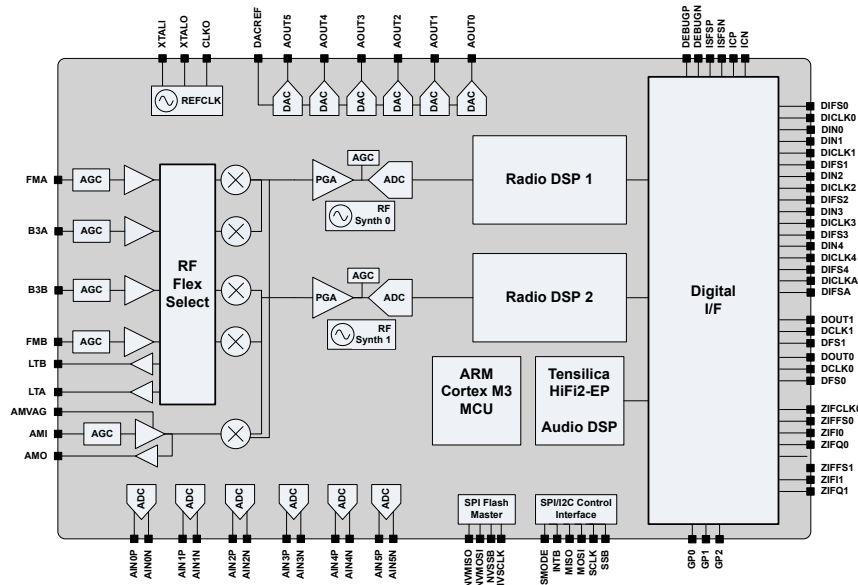
High-Performance Automotive AM/FM Radio Receiver and HD Radio™/DAB/DAB+/DMB/DRM Tuner with Audio System

The Si47971/72 integrates two global radio receivers with audio processing. The analog AM/FM receivers and digital radio tuners set a new standard for automotive broadcast reception. The integrated audio processing subsystem provides a complete solution to synchronize, process, aggregate, and distribute digital and analog audio signals in the head unit.

The Si47971/72 is the most integrated automotive tuner in the industry with the smallest external bill of materials. Si47971/72 based systems can scale from a low-cost dual tuner AM/FM radio to the highest performance systems with multiple tuners and multiple antennas, enabling the radio suppliers to reuse their R&D across multiple product lines, all with a common software API. The Si47971/72 A-grade parts meet rigorous automotive quality standards.

Applications

- OEM automotive infotainment systems
- Aftermarket car radio systems



KEY FEATURES

- Dual worldwide FM band support (64–108 MHz)
- Dual worldwide AM band support (520–1710 kHz)
- Dual LW band support (144–288 kHz)
- Dual SW band support (2.3–30 MHz)
- Dual DAB/DAB+/DMB support (Si47972 only) (168–240 MHz)
- NOAA Weather Band support
- On-chip RDS/RDBS
- AM/FM:
 - Comprehensive AM/FM signal processing firmware
 - Integrated active AM/FM buffers
 - Analog FM phase diversity
- HD Radio:
 - Digital I/Q interface to HD Radio Processor
 - HD Radio MRC
- DRM30/DRM+:
 - Digital I/Q interface to DRM processor
- Dual DAB/DAB+/DMB (Si47972 only):
 - Digital I/Q interface to DAB/DAB+/DMB processor
 - DAB/DAB+/DMB MRC
 - Integrated active Band III buffer
- Audio
 - S/PDIF Digital Audio Interface
 - 1.8 V or 3.3 V digital IO power supplies
 - 3.3 V analog power supply and 1.8 V digital power supply
 - QFN 88-pin, 12x12x0.85 mm
 - Pb-free/RoHS compliant
 - AEC-Q100 qualified (A-grade parts)

1. Pin Descriptions

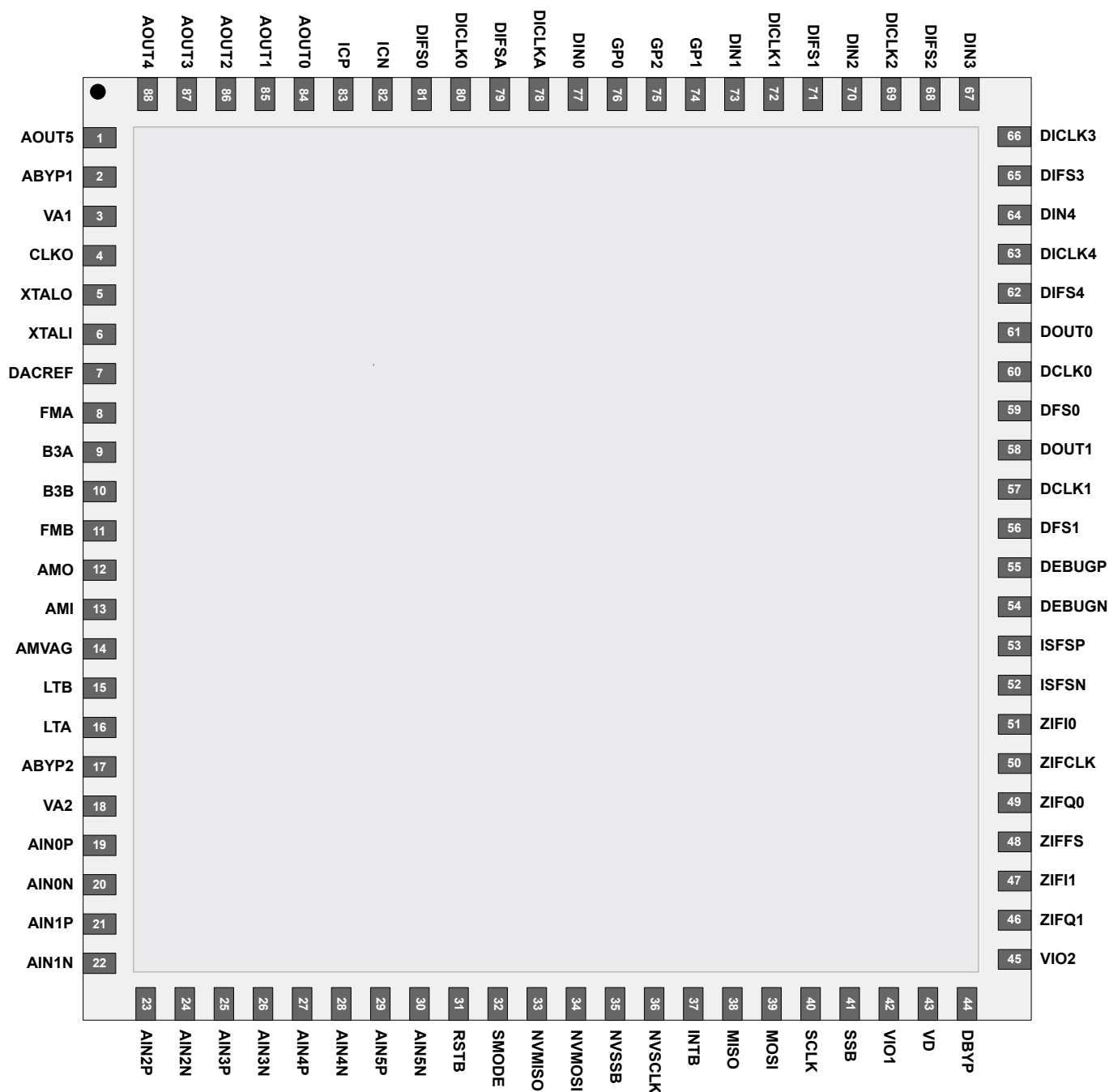


Figure 1.1. Si47971-72 Pinout Diagram

2. Package Outline

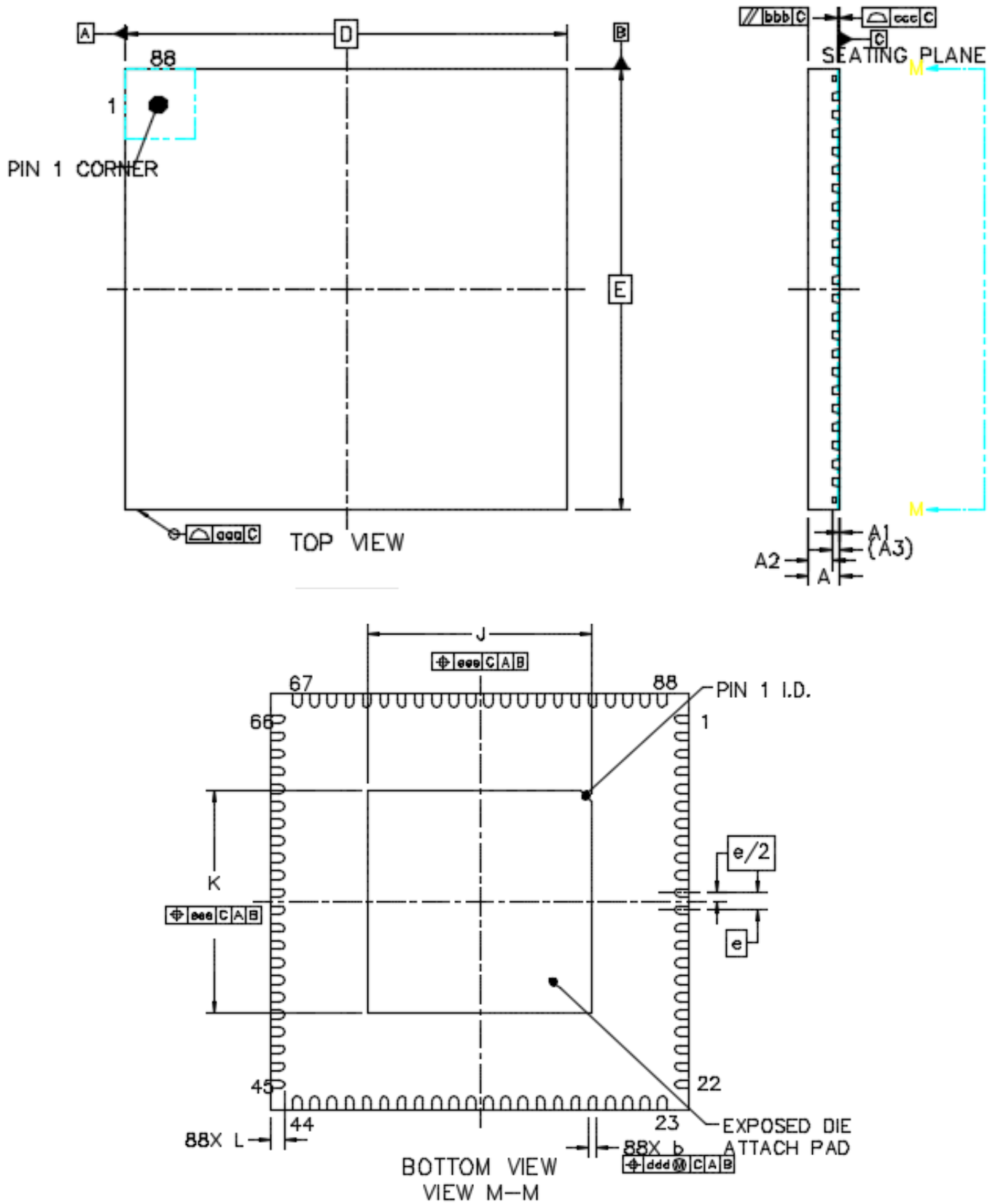


Figure 2.2. 88-Pin QFN

Table 2.1. Package Dimensions

Dimensions	Min	Nom	Max
A	0.80	0.85	0.90
A1	0.00	0.035	0.05
b	0.20	0.25	0.30
A3	0.203 REF		
D	12.00 BSC		
e	0.5 BSC		
E	12.00 BSC.		
D2	6.30	6.40	6.50
E2	6.30	6.40	6.50
L	0.35	0.40	0.45
K	0.20	—	—
aaa	0.10		
bbb	0.10		
ccc	0.08		
ddd	0.10		
eee	0.10		

Note:

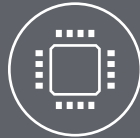
1. All dimensions shown are in millimeters (mm) unless otherwise noted.
2. Dimensioning and Tolerancing per ANSI Y14.5M-1994.
3. Recommended card reflow profile is per the JEDEC/IPC J-STD-020 specification for Small Body Components.



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