

Si4694 Data Short

High-Performance DRM30 Baseband Coprocessor

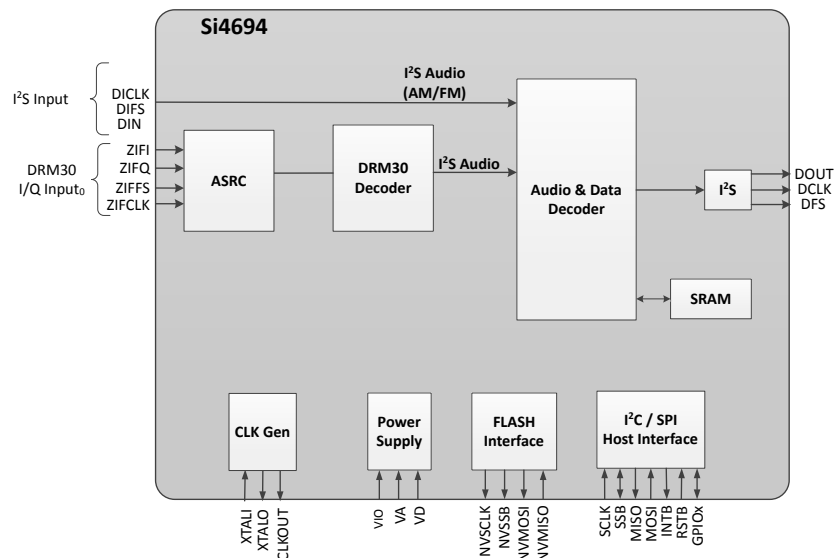
The Si4694 DRM30 digital radio coprocessor provides significant advances in size, power consumption, and performance to enable DRM30 Radio reception in automotive infotainment systems and car radios. It is designed to work with the high-performance automotive Si479xx family of radio tuners.

Applications

- Automotive OEM infotainment systems
- Aftermarket car radio systems

KEY FEATURES

- DRM30 coprocessor
- FAC and SDC decoder
 - Multiplex info
 - Service list
 - Component info
 - Service linking info
 - Announcement info
- Full support for data services
 - Packet mode
 - MOT, TPEG packet outputs
- No external RAM required for channel decoding or seamless blending
- Flash memory interface for application program load
- Interfaces with Si479xx tuners and supports Zero-IF DRM30 I/Q at 192 kS/s
- Receives AM/FM audio over I²S to generate audio output
- Integrated crystal oscillator
- Reference clock input
- SPI or I²C control interface
- LGA 72-pin, 10 x 10 x 1 mm
 - Pb-free/RoHS compliant
- AEC-Q100 qualified (A-grade devices)



1. Pin Descriptions Si4694

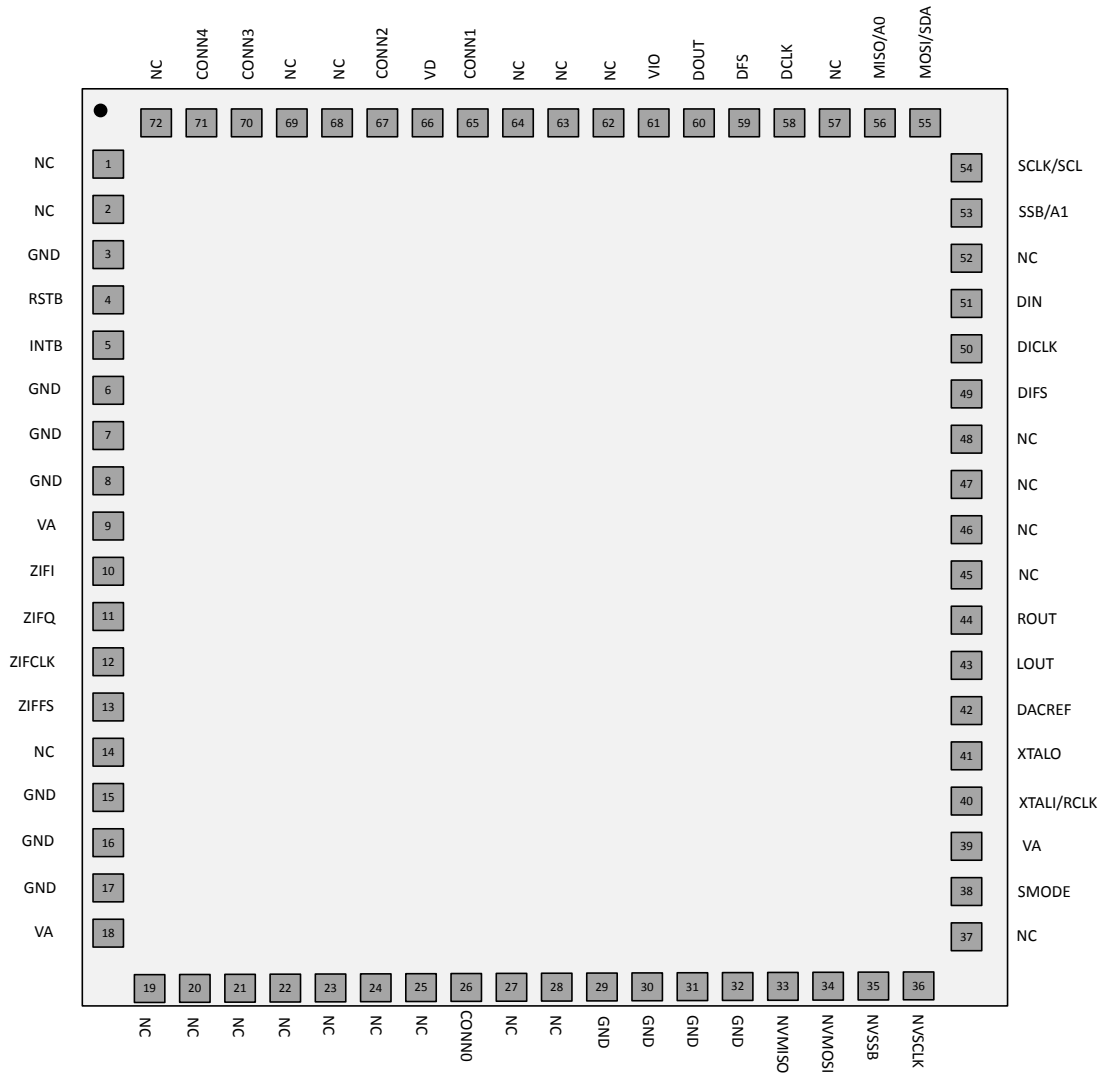


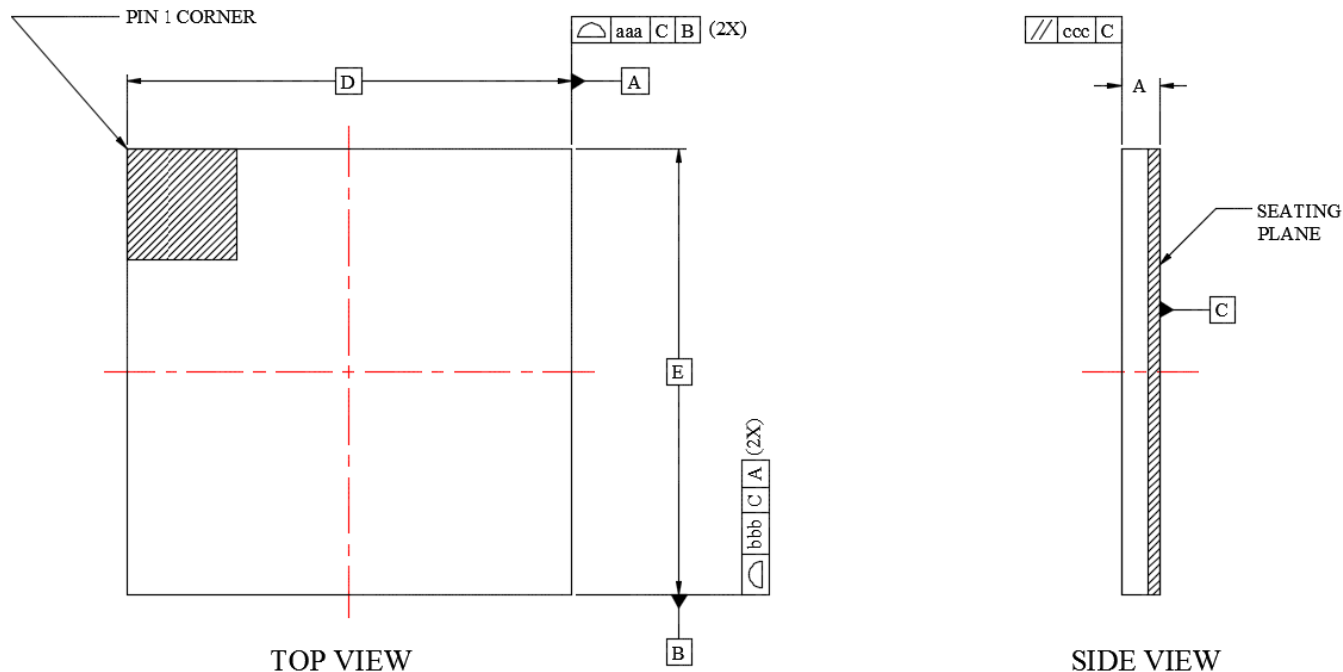
Table 1.1. Si4694 Pin Descriptions

Pin Number	Pin Name	I/O	Description
1	NC		No connect; leave floating
2	NC		No connect; leave floating
3	GND	I	Ground
4	RSTB	I	Active low reset signal
5	INTB	O	Interrupt
6	GND	I	Ground
7	GND	I	Ground
8	GND	I	Ground
9	VA	I	Analog supply voltage
10	ZIFI	I	ZIF I-data input for DRM30 coprocessor
11	ZIFQ	I	ZIF Q-data input for DRM30 coprocessor
12	ZIFCLK	I	ZIF clock input for DRM30 coprocessor
13	ZIFFS	I	ZIF frame input for DRM30 coprocessor
14	NC		No connect; leave floating
15	GND	I	Ground
16	GND	I	Ground
17	GND	I	Ground
18	VA	I	Analog supply voltage
19	NC		No connect; leave floating
20	NC		No connect; leave floating
21	NC		No connect; leave floating
22	NC		No connect; leave floating
23	NC		No connect; leave floating
24	NC		No connect; leave floating
25	NC		No connect; leave floating
26	CONN0		Connect a pull-down resistor 10 k Ω to GND
27	NC		No connect; leave floating
28	NC		No connect; leave floating
29	GND	I	Ground
30	GND	I	Ground
31	GND	I	Ground
32	GND	I	Ground
33	NVMISO	I	SPI data input for serial flash
34	NVMOSI	O	SPI data output for serial flash
35	NVSSB	O	SPI slave select for serial flash

Pin Number	Pin Name	I/O	Description
36	NVCLK	O	SPI clock for serial flash
37	NC		No connect; leave floating
38	S.MODE	I	S.MODE=0 --> SPI, S.MODE=1 --> I ² C
39	VA	I	Analog supply voltage
40	XTALI/RCLK	I	Crystal oscillator input/Reference clock input
41	XTALO	O	Crystal oscillator output [0 Ω pulldown needed when using RCLK input]
42	NC		No connect; leave floating
43	NC		No connect; leave floating
44	NC		No connect; leave floating
45	NC		No connect; leave floating
46	NC		No connect; leave floating
47	NC		No connect; leave floating
48	NC		No connect; leave floating
49	DIFS	I/O	Digital audio frame sync
50	DICLK	I/O	Digital audio bit clock
51	DIN	I	Digital audio input
52	NC		No connect; leave floating
53	SSB/A1	I	SPI slave select/ I ² C A1 address select
54	SCLK/SCL	I	SPI clock/I ² C clock
55	MOSI/SDA	I/O	SPI data input/ I ² C data input/output
56	MISO/A0	O/I	SPI data output/ I ² C A0 address select
57	NC		No connect; leave floating
58	DCLK	I/O	Digital audio bit clock
59	DFS	I/O	Digital audio frame sync
60	DOUT	O	Digital audio output
61	VIO	I	I/O supply voltage
62	NC		No connect; leave floating
63	NC		No connect; leave floating
64	NC		No connect; leave floating
65	CONN1		Connect a pull-down resistor 10 k Ω to GND
66	VD	I	Digital supply voltage
67	CONN2		Connect a pull down resistor 10 k Ω to GND
68	NC		No connect; leave floating
69	NC		No connect; leave floating
70	CONN3		Short to pin 71 (CONN4)
71	CONN4		Short to pin 70 (CONN3)
72	NC		No connect; leave floating

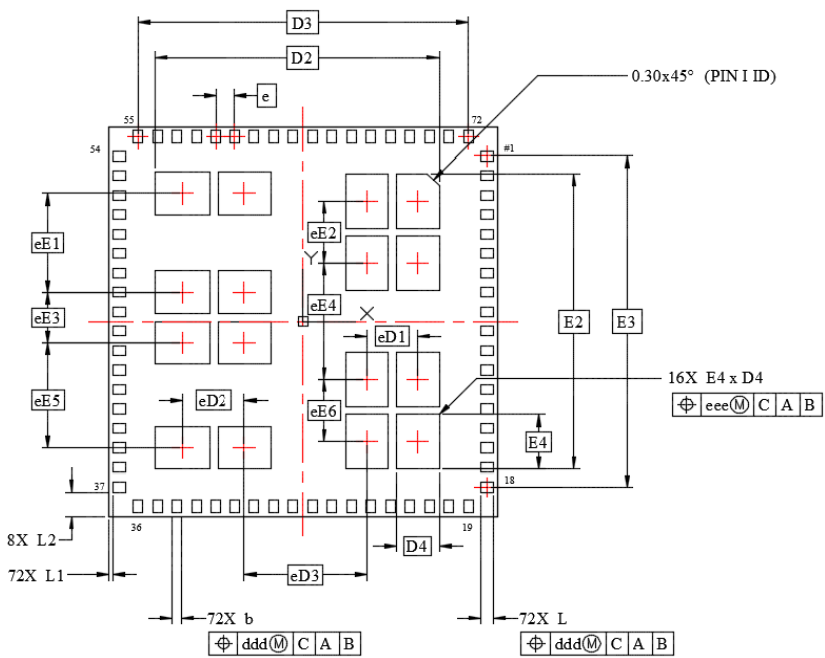
2. Package Outline

The following figure illustrates the package details for the Si4694. The table lists the values for the dimensions shown in the illustration.



TOP VIEW

SIDE VIEW



BOTTOM VIEW

Figure 2.1. 10 x 10 mm 72-Pin LGA

Table 2.1. Package Diagram Dimensions

Dimension	Min	Nom	Max
A	0.80	0.90	1.00
b	0.15	0.25	0.35
D	10.0 BSC		
D2	7.20	7.30	7.40
D3	8.50 BSC		
D4	1.00	1.10	1.20
e	0.50 BSC		
E	10.0 BSC		
E2	7.50	7.60	7.70
E3	8.50 BSC		
E4	1.30	1.40	1.50
L	0.225	0.325	0.425
L1	0.05	0.10	0.15
L2	0.575	0.625	0.675
eD1	1.30 BSC		
eD2	1.60 BSC		
eD3	3.15 BSC		
eE1	2.55 BSC		
eE2	1.60 BSC		
eE3	1.30 BSC		
eE4	3.00 BSC		
eE5	2.70 BSC		
eE6	1.60 BSC		
aaa	0.10		
bbb	0.10		
ccc	0.10		
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. This drawing conforms to the JEDEC Solid State Outline MO-220.
4. Recommended card reflow profile is per the JEDEC/IPC J-STD-020 specification for Small Body Components.



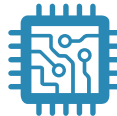
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