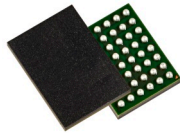


Power management IC



Features

- Supply input voltage range
 - V_{IN} from 2.6 V to 5.5 V
- Fully integrated power solution
 - One 4 A DC/DC buck converter
 - Three 2 A DC/DC buck converters
 - Three LDOs up to 600 mA
 - Integrated NMOS/PMOS power devices
 - Dynamically programmable output voltage (0.6 V - 3.75 V)
- Device configurability
 - Programmable soft start slope with warm startup support
 - Programmable buck phase interleaving
 - Programmable nReset and Power Good pins
 - Programmable start up sequence
- High efficiency
 - PFM mode with low quiescent current
 - Automatic PWM / PSK mode transition for efficiency optimization
- High speed I²C serial interface (3.4 MHz)
- Temperature monitor and shutdown
- 4.2x3.2x0.6 mm, 48 balls, UFQFPN package

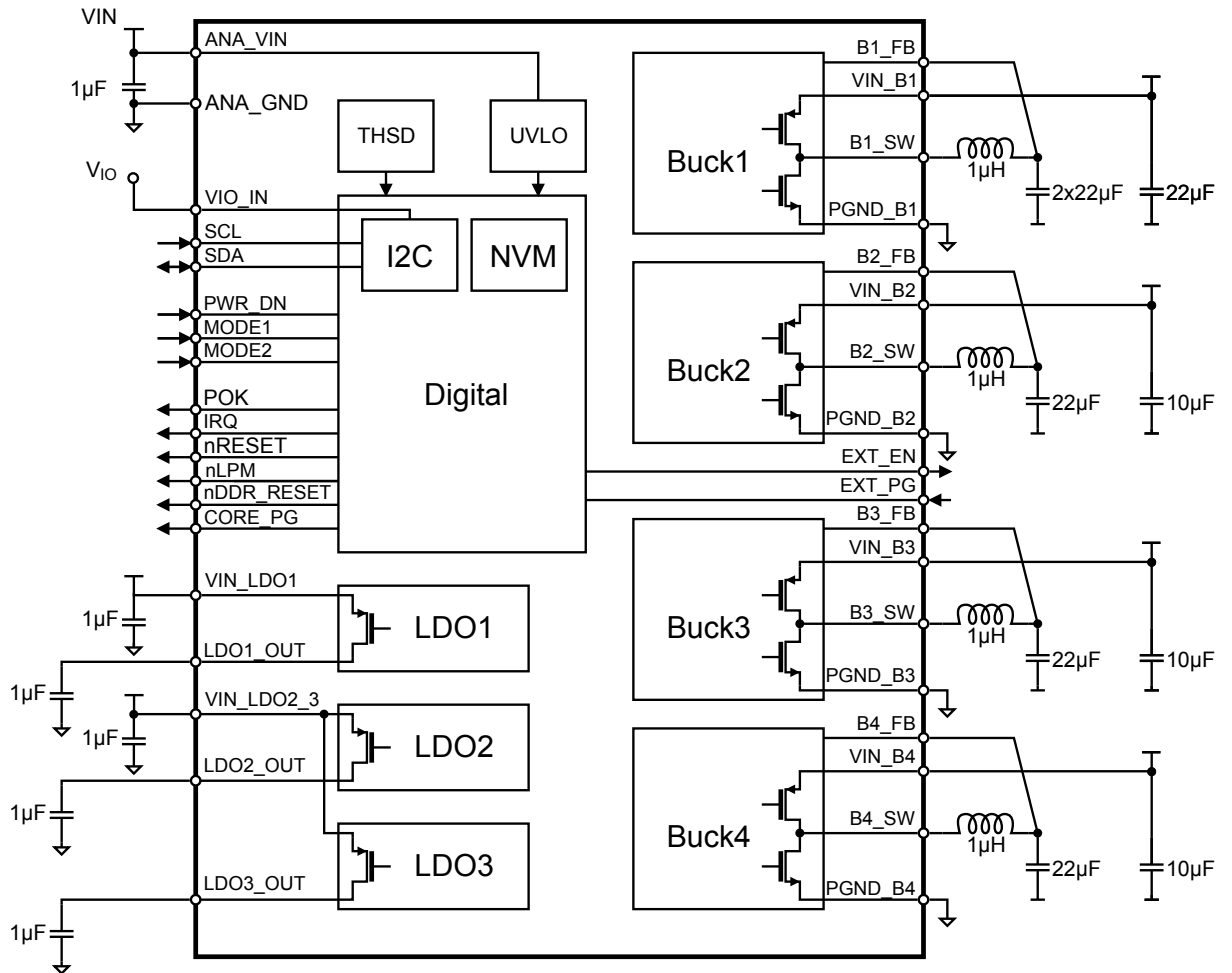
Description

STPMIC07M is a power management device designed for consumer applications. It features 4 Buck and 3 LDO regulators which output voltages are fully programmable. Buck regulators are able to maintain high efficiency at both normal and light load. The device communicates with the controller via I²C serial interface.

Product status link	
STPMIC07M	
Product summary	
Order code	STPMIC07M
Ambient temperature range	-25 to 95 °C
Package	UFQFPN-48 (4.2x3.2x 0.6 mm)
Packing	Tape and reel

1 Block diagram

Figure 1. Block diagram



2 Package information

In order to meet environmental requirements, ST offers these devices in different grades of **ECOPACK** packages, depending on their level of environmental compliance. ECOPACK specifications, grade definitions and product status are available at: www.st.com. ECOPACK is an ST trademark.

2.1 UFQFPN - 48 (4.2x3.2x0.6 mm) package information

Figure 2. UFQFPN - 48 (4.2x3.2x0.6 mm) package outline

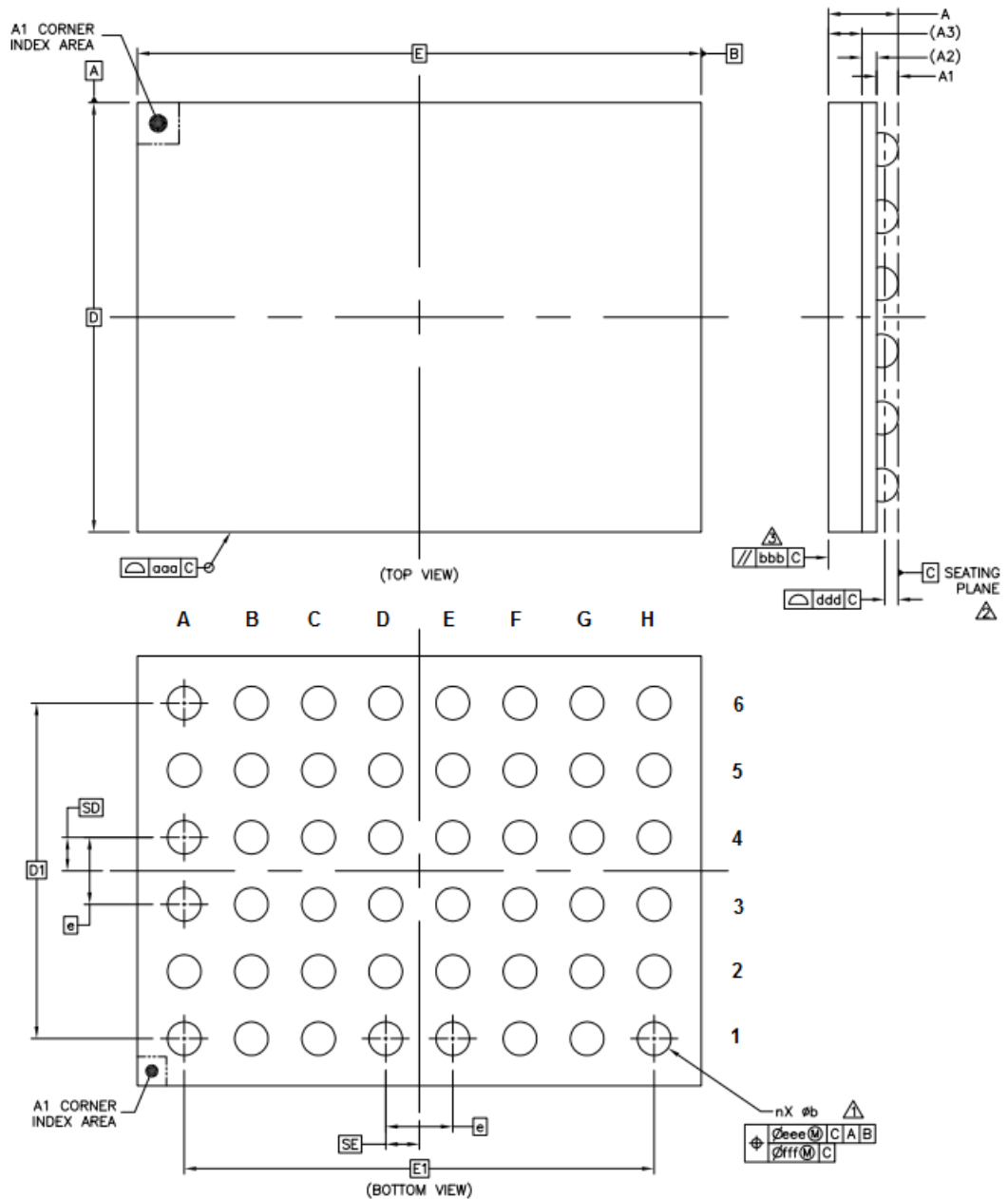



Table 1. UFQFPN - 48 (4.2x3.2x0.6 mm) mechanical data

Symbol	Milimeters		
	Min	Typ	Max
A	0.41	0.52	0.6
A1	0.11	0.16	0.21
A2	-	0.11 REF	-
A3	-	0.25 REF	-
D	-	3.2 BSC	-
E	-	4.2 BSC	-
Ball diameter		0.25	
Ball opening		0.25	
b	0.2	0.25	0.3
e	-	0.5 BSC	-
N	-	48	-
D1	-	2.5 BSC	-
E1	-	3.5 BSC	-
SD	-	0.25 BSD	-
SE	-	0.25 BSD	-
aaa	-	0.1	-
bbb	-	0.1	-
ddd	-	0.1	-
eee	-	0.15	-
fff	-	0.08	-

Note:  Dimension b is measured at the maximum solder ball diameter, parallel to datum plane C.

Note:  Datum C (seating plane) is defined by the spherical crowns of the solder balls.

Note:  Parallelism measurement shall exclude any effect of mark on top surface of package.

Revision history

Table 2. Document revision history

Date	Version	Changes
2-Mar-2021	1	Initial release.

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