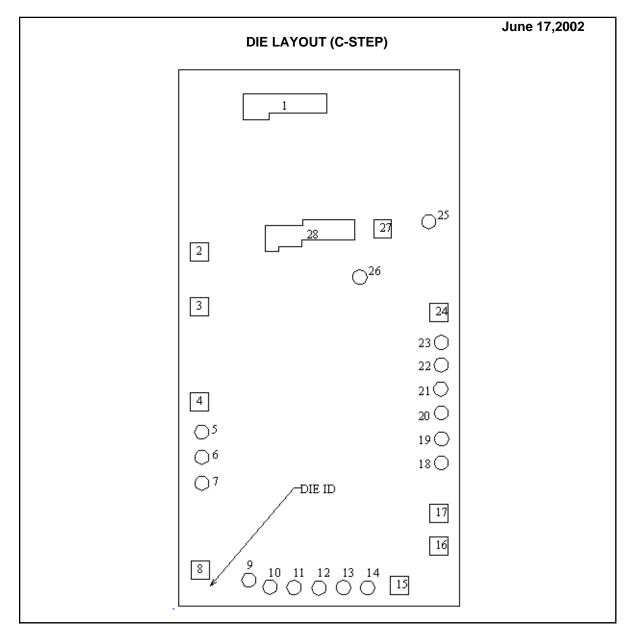


# LM2594HV3.3 MDC MWC SIMPLE SWITCHER ® POWER CONVERTER 150 KHZ 0.5A STEP-DOWN VOLTAGE REGULATOR



## DIE/WAFER CHARACTERISTICS

Fabrication Attributes		General D	General Die Information		
Physical Die Identification	LM1594C	Bond Pad Opening Size (min)	112μm x 112μm		
Die Step	С	Bond Pad Metalization	ALUMINUM		
Phys	Physical Attributes		VOM NITRIDE		
Wafer Diameter	150mm	Back Side Metal	BARE BACK		
Die Size (Drawn)	1727μm x 3302μm 68mils x 130mils	Back Side Connection	Float Backside		
Thickness	406µm Nominal		-		
Min Pitch	130µm Nominal				

## Special Assembly Requirements: Note: Actual die size is rounded to the nearest micron.



The Sight & Sound of Information

LM2594HV3.3 MDC MWC

SIMPLE SWITCHER ® POWER CONVERTER 150 KHZ 0.5A STEP-DOWN VOLTAGE
REGULATOR

Die Bond Pad Coordinate Locations (C -Step)							
(Referenced to die center, coordinates in $\mu$ m) NC = No Connection							
SIGNAL	PAD#	X/Y CORRDINATES		P	PAD SIZE		
NAME	NUMBER	Х	Y	Х		Y	
OUTPUT	1	-212	1422	512	х	159	
NC	2	-737	531	112	x	112	
NC	3	-737	195	112	x	112	
NC	4	-737	-394	112	x	112	
NC	5	-725	-577	88	x	88	
NC	6	-723	-733	88	x	88	
NC	7	-723	-895	88	x	88	
FB	8	-733	-1427	112	х	112	
NC	9	-436	-1491	88	x	88	
NC	10	-306	-1537	87	x	87	
NC	11	-155	-1537	87	x	87	
NC	12	-4	-1537	87	x	87	
NC	13	147	-1537	87	x	87	
NC	14	298	-1537	87	x	87	
NC	15	492	-1525	112	x	112	
/ON_OFF	16	737	-1283	112	х	112	
GND	17	737	-1081	112	х	112	
NC	18	750	-771	87	x	87	
NC	19	750	-620	87	x	87	
NC	20	750	-469	87	x	87	
NC	21	750	-318	87	x	87	
NC	22	750	-167	87	х	87	
NC	23	750	-26	88	х	88	
GND	24	737	157	112	х	112	
NC	25	672	713	88	х	88	
NC	26	247	373	88	х	88	
VIN	27	390	675	112	х	112	
VIN	28	-58	631	552	Х	199	



DPBU **Die Datasheet** 

The Sight & Sound of Information LM2594HV3.3 MDC MWC SIMPLE SWITCHER ® POWER CONVERTER 150 KHZ 0.5A STEP-DOWN VOLTAGE REGULATOR

#### Life Support Policy

### NATIONAL'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF NATIONAL SEMICONDUCTOR CORPORATION. As used herein:

- 1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.
- 2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety of effectiveness.

National m i c o n d u c t o r

Tel:

Fax:

Tel:

Tel:

IN U.S.A. Tel: Fax:

1 877 Dial Die (1 877 342 5343 1 207 541 6140

IN EUROPE 49 (0) 8141 351492 / 1495 49 (0) 8141 351470 IN ASIA PACIFIC

(852) 27371701

IN JAPAN 81 043 299 2308

National Semiconductor does not assume any responsibility for use of any circuitry described, no circuit patent licenses are implied, and national reserves the right, at any time without notice, to change said circuitry or specifications.

National Semiconductor Corporation 2900 Semiconductor Drive, P.O. Box 58090, Santa Clara, California 95052-8090

#### **IMPORTANT NOTICE**

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products (also referred to herein as "components") are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its components to the specifications applicable at the time of sale, in accordance with the warranty in TI's terms and conditions of sale of semiconductor products. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by applicable law, testing of all parameters of each component is not necessarily performed.

TI assumes no liability for applications assistance or the design of Buyers' products. Buyers are responsible for their products and applications using TI components. To minimize the risks associated with Buyers' products and applications, Buyers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of significant portions of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI components or services with statements different from or beyond the parameters stated by TI for that component or service voids all express and any implied warranties for the associated TI component or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards which anticipate dangerous consequences of failures, monitor failures and their consequences, lessen the likelihood of failures that might cause harm and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed a special agreement specifically governing such use.

Only those TI components which TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components which have *not* been so designated is solely at the Buyer's risk, and that Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components which meet ISO/TS16949 requirements, mainly for automotive use. Components which have not been so designated are neither designed nor intended for automotive use; and TI will not be responsible for any failure of such components to meet such requirements.

Products		Applications			
Audio	www.ti.com/audio	Automotive and Transportation	www.ti.com/automotive		
Amplifiers	amplifier.ti.com	Communications and Telecom	www.ti.com/communications		
Data Converters	dataconverter.ti.com	Computers and Peripherals	www.ti.com/computers		
DLP® Products	www.dlp.com	Consumer Electronics	www.ti.com/consumer-apps		
DSP	dsp.ti.com	Energy and Lighting	www.ti.com/energy		
Clocks and Timers	www.ti.com/clocks	Industrial	www.ti.com/industrial		
Interface	interface.ti.com	Medical	www.ti.com/medical		
Logic	logic.ti.com	Security	www.ti.com/security		
Power Mgmt	power.ti.com	Space, Avionics and Defense	www.ti.com/space-avionics-defense		
Microcontrollers	microcontroller.ti.com	Video and Imaging	www.ti.com/video		
RFID	www.ti-rfid.com				
OMAP Applications Processors	www.ti.com/omap	TI E2E Community	e2e.ti.com		
Wireless Connectivity	www.ti.com/wirelessconnectivity				

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265 Copyright © 2012, Texas Instruments Incorporated