

## DIO7964

### 3-Channel Low Dropout Regulator

#### Features

- Integrated Solution for multiple LDOs
- LDO with 5V input to 3.3V, 1.0V and 1.8V
- Built-In fault Protection Circuitry
- -40°C to +85°C Operating Temperature Range
- Green packages: EP-MSOP-8 and EP-SOIC-8

#### Descriptions

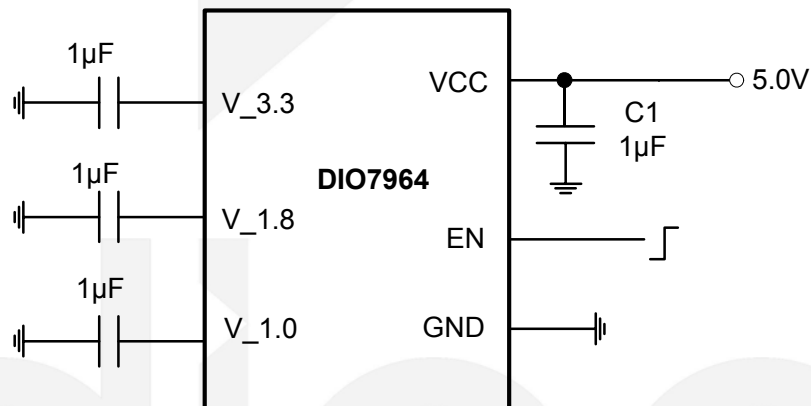
DIO7964 features 3-channel LDO output offering maximum flexibility in system design, while it has low operating current of typically 100µA.

The DIO7964 are both available in the Green EP-SOIC-8 and EP-MSOP-8 packages with exposed thermal pad. It operates over an ambient temperature range of -40°C to +85°C.

#### Applications

- Set-top box
- Mobile device

#### Typical Application



#### Ordering Information

Order Part Number	Top Marking		T <sub>A</sub>	Package	
DIO7964XS8	DIO796X	Green	-40 to +85°C	EP-SOIC-8	Tape & Reel, 2500
DIO7964XM8	DIO796X	Green	-40 to +85°C	EP-MSOP-8	Tape & Reel, 3000

## Pin Assignments

EP-MSOP-8/EP-SOIC-8 (Top View)

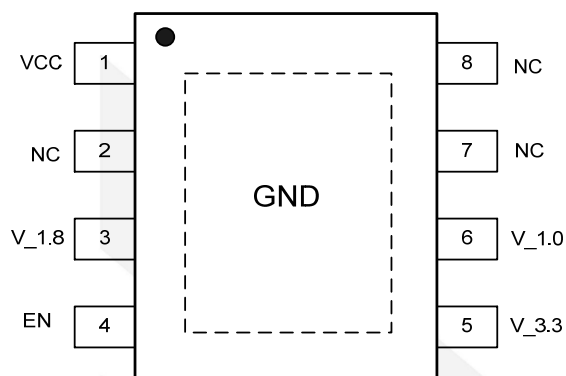


Figure 1 Pin-out Assignment

## Pin Description

Pin Name	Pin number	Pin Description
VCC	1	Power supply.
V_1.8	3	1.8V LDO Output.
EN	4	Enable Pin.
V_3.3	5	3.3V LDO Output.
V_1.0	6	1.0V LDO Output.
NC	2,7,8	No connect, Floating, don't connect to ground.
GND	Exposed pad	Ground.



## Absolute Maximum Ratings

Stresses beyond those listed under “Absolute Maximum Rating” may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other condition beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Parameter		Rating	Unit
VCC		-0.3V to 6V	V
Junction Temperature Range		145	°C
Lead Temperature (Soldering, 10 sec.)		260	°C
Storage Temperature Range (T <sub>STG</sub> )		-65 to 150	°C
ESD Susceptibility	HBM (Human Body Mode)	2	kV
	CDM (Charge Device Mode)	1	

Note: Input and output negative ratings may be exceeded if input and output diode current ratings are observed.

## Recommended Operating Conditions

The Recommended Operating Conditions table defines the conditions for actual device operation to ensure optimal performance to the datasheet specifications. DIOO does not recommend exceeding them or designing to Absolute Maximum Ratings.

Parameter		Rating	Unit
VCC		4.5 to 5.5	V
All other pins		0 to 5.5	V
Junction Temperature Range		-40 to 125	°C
Ambient Temperature Range		-40 to 85	°C



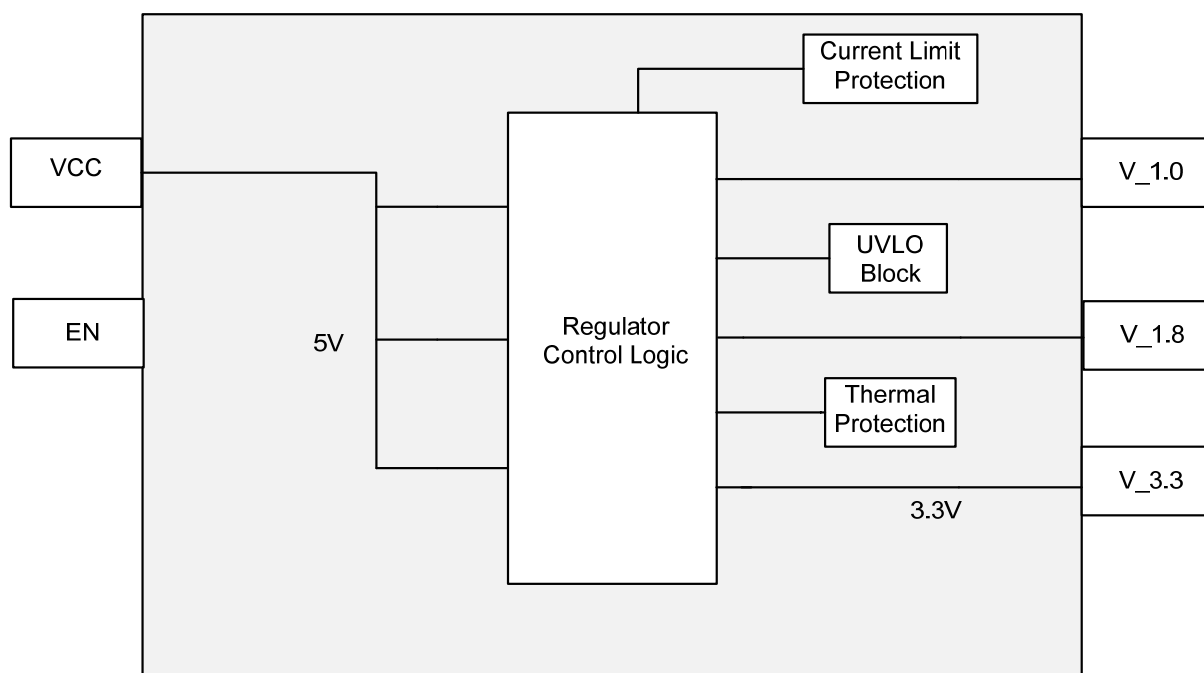
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### Electrical Characteristics

(VCC= 5.0V, T<sub>A</sub>= 25°C, unless otherwise specified.)

Parameters	Conditions	Min	Typ.	Max	Units
<b>Input Power Supply</b>					
VCC Operating Voltage		4.5		5.5	V
VCC Operating Current	VCC = 5.0V, no load		137		μA
EN Logic High Threshold		1.5			V
EN Logic Low Threshold				0.4	V
<b>LDO Output Characteristics</b>					
Current Limit			150		mA
Load Regulation	I <sub>out</sub> : 1mA to 100mA, VCC:4.75 to 5.25V			1	%
Line Regulation	I <sub>out</sub> = 1mA, VCC :4.75 to 5.25V			0.2	%
Thermal Shutdown Temperature			140		°C
Thermal Shutdown Hysteresis			17		°C
Output accuracy		-2		2	%

**Block Diagram**



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## CONTACT US

Dioo is a professional design and sales corporation for high-quality and performance analog semiconductors. The company focuses on industry markets, such as, cell phone, handheld products, laptop, and medical equipment and so on. Dioo's product families include analog signal processing and amplifying, LED drivers and charger IC. Go to <http://www.dioo.com> for a complete list of Dioo product families.

For additional product information, or full datasheet, please contact with our Sales Department or Representatives.

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DIO7964XS8