



Limited Datasheet

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Email datasheet.requiry@dioo.com

DIO6012B

High-Efficiency 1MHz, 2A Continuous, 3A Peak, Output Synchronous Step Down Converter

Features

- 2.7-5.5V input voltage range
- 2A continuous, 3A peak load current
- Low $R_{DS(ON)}$ for internal switches (top/bottom) 100mΩ/80mΩ
- High switching frequency minimizes the external components
- Internal soft-start limits the inrush current
- 100% dropout operation capability with input voltage up to 5V
- Green package:
SOT23-5, SOT23-6, DFN2*2-8
- Other packages are available upon requests

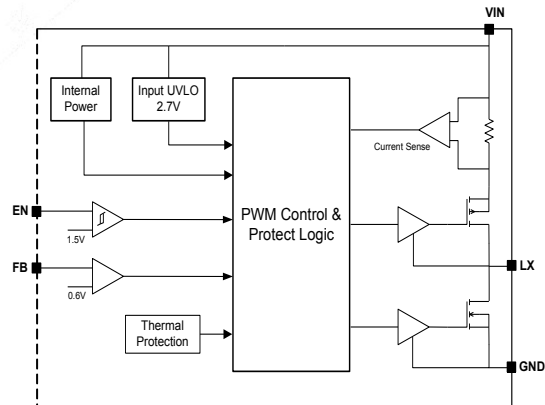
Applications

- LCD TV
- Set Top Box
- Net PC
- Mini-Notebook PC
- Access Point Router

Descriptions

The DIO6012B is high-efficiency, high frequency synchronous step-down DC-DC regulator ICs capable of delivering up to 3A Peak load current. The DIO6012B family operate over a wide input voltage range from 2.7V to 5.5V and integrate main switch and synchronous switch with very low $R_{DS(ON)}$ to minimize the conduction loss. Low output voltage ripple and small external inductor and capacitor sizes are achieved with greater than 1MHz switching frequency.

Function Block



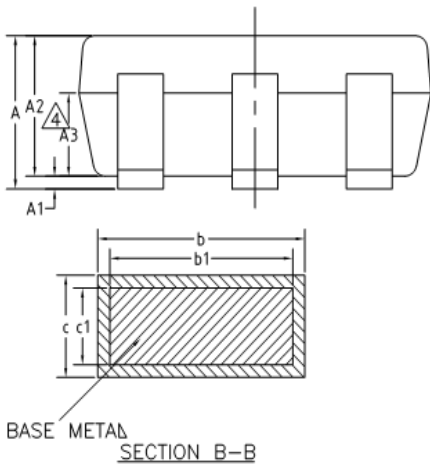
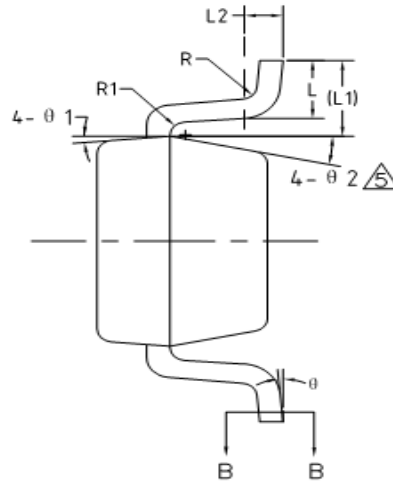
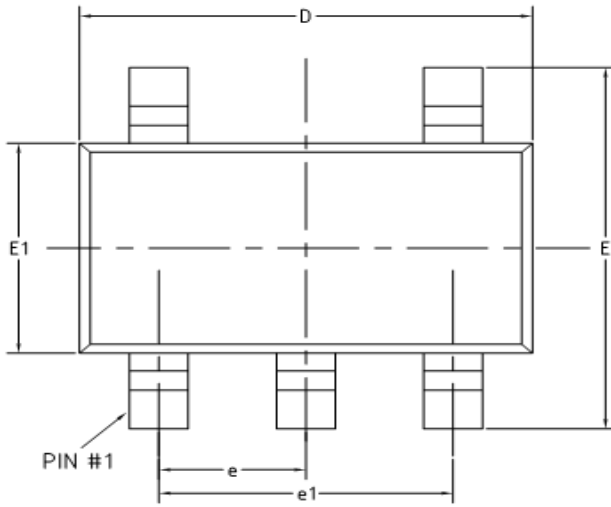
Ordering Information

Order Part Number	Top Marking		T _A	Package	
DIO6012BCST5	CYWD	Green	-40 to +85°C	SOT23-5	Tape & Reel, 3000
DIO6012BCST6	CYWD	Green	-40 to +85°C	SOT23-6	Tape & Reel, 3000
DIO6012BCN8	6012	Green	-40 to +85°C	DFN2*2-8	Tape & Reel, 3000

Marking Definition



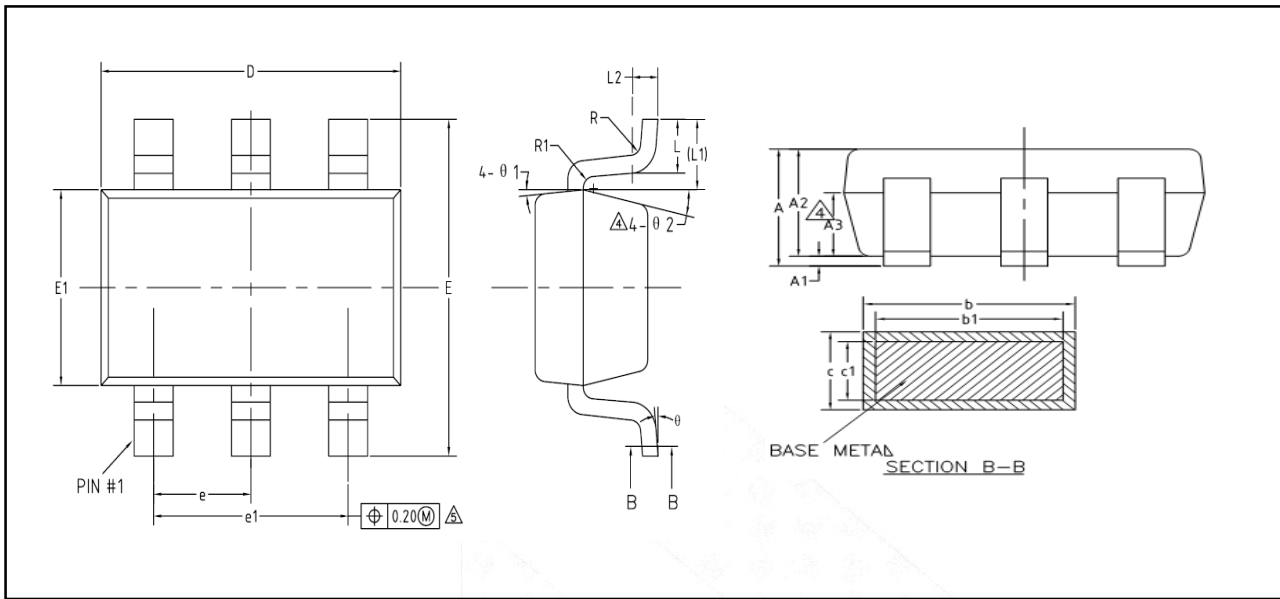
Physical Dimensions: SOT-23-5



COMMON DIMENSIONS (UNITS OF MEASURE=MILLIMETER)			
Symbol	MIN	NOM	MAX
A	-	-	1.25
A1	0	-	0.15
A2	1.00	1.10	1.20
A3	0.60	0.65	0.70
b	0.36	-	0.50
b1	0.36	0.38	0.45
c	0.14	-	0.20
c1	0.14	0.15	0.16
D	2.826	2.926	3.026
E	2.60	2.80	3.00
E1	1.526	1.626	1.726
e	0.90	0.95	1.00
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.59REF		
L2	0.25BSC		
R	0.10	-	-
R1	0.10	-	0.25
θ	0°	-	8°
$\theta 1$	3°	5°	7°
$\theta 2$	6°	-	14°

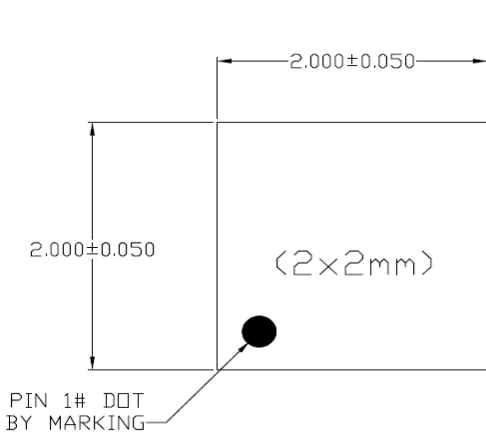
Physical Dimensions: SOT-23-6

High-Efficiency 1MHz, 2A Continuous, 3A Peak, Output Synchronous Step Down Converter

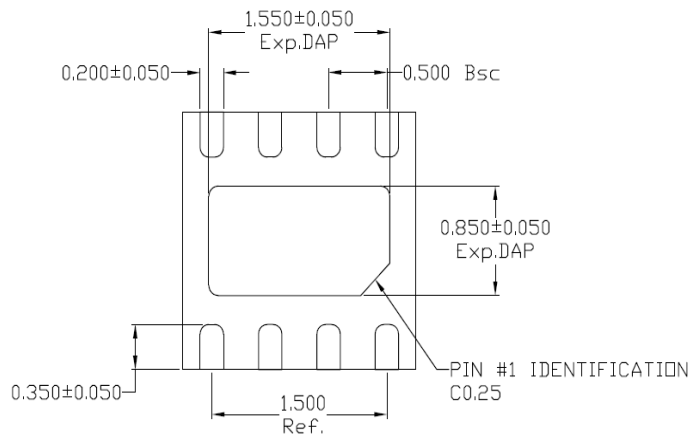


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A	-	-	1.25
A1	0	-	0.15
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A3	0.60	0.65	0.70
b	0.36	-	0.50
b1	0.36	0.38	0.45
c	0.14	-	0.20
c1	0.14	0.15	0.16
D	2.826	2.926	3.026
E	2.60	2.80	3.00
E1	1.526	1.626	1.726
e	0.90	0.95	1.00
e1	1.80	1.90	2.00
L	0.35	0.45	0.60
L1	0.59REF		
L2	0.25BSC		
R	0.10	-	-
R1	0.10	-	0.25
θ	0°	-	8°
θ1	3°	5°	7°
θ2	6°	-	14°

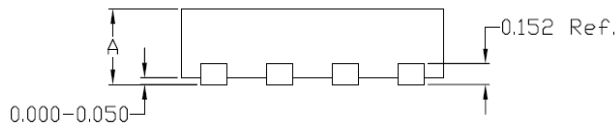
Physical Dimensions: DFN-8 2*2



TOP VIEW



BOTTOM VIEW

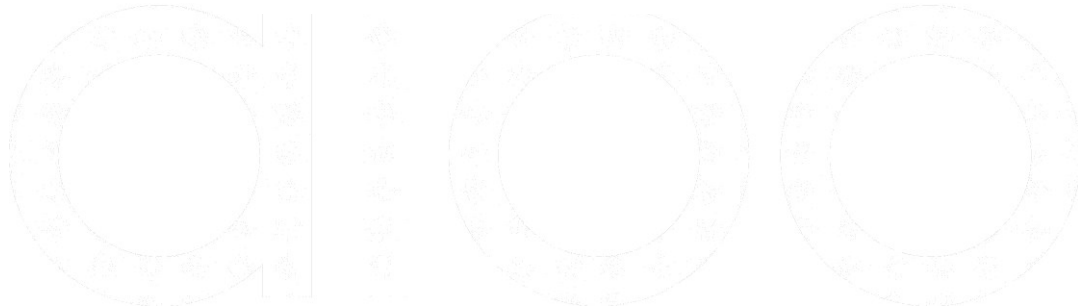


SIDE VIEW

NOTE:

1). ' A ' DIMENSION AS BELOW TABLE

A	MAX.	0.600
	NOM.	0.550
	MIN.	0.500



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 equipments 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.

