



# DIO6011

## High-Efficiency 1.5MHz, 1A Output Synchronous Step Down Converter

### Features

- Low  $R_{DS(ON)}$  for internal switches (top/bottom) 230mΩ/170mΩ, 1.0A
- 2.5-5.5V input voltage range
- 40μA typical quiescent current
- High light load efficiency
- High switching frequency 1.5MHz minimizes the external components
- Internal soft start limits the inrush current
- 100% dropout operation
- Green package:  
SOT23-5, DFN-6 is pin compatible.

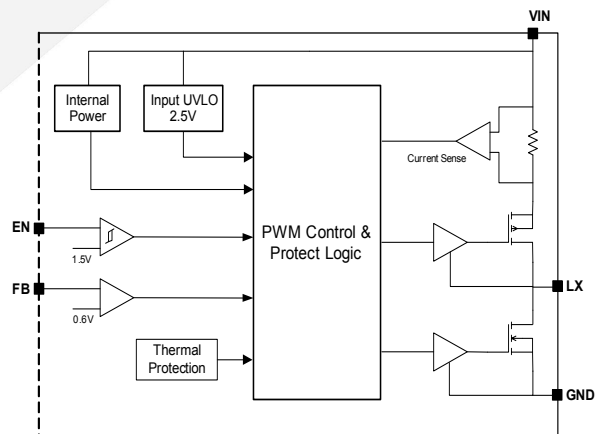
### Applications

- Portable Navigation Device
- Set Top Box
- USB Dongle
- Media Player
- Smart phone

### Descriptions

The DIO6011 is high-efficiency, high frequency synchronous step-down DC-DC regulator ICs capable of delivering up to 1A output currents. The DIO6011 family operate over a wide input voltage range from 2.5V 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 1.5MHz switching frequency.

### Function Block



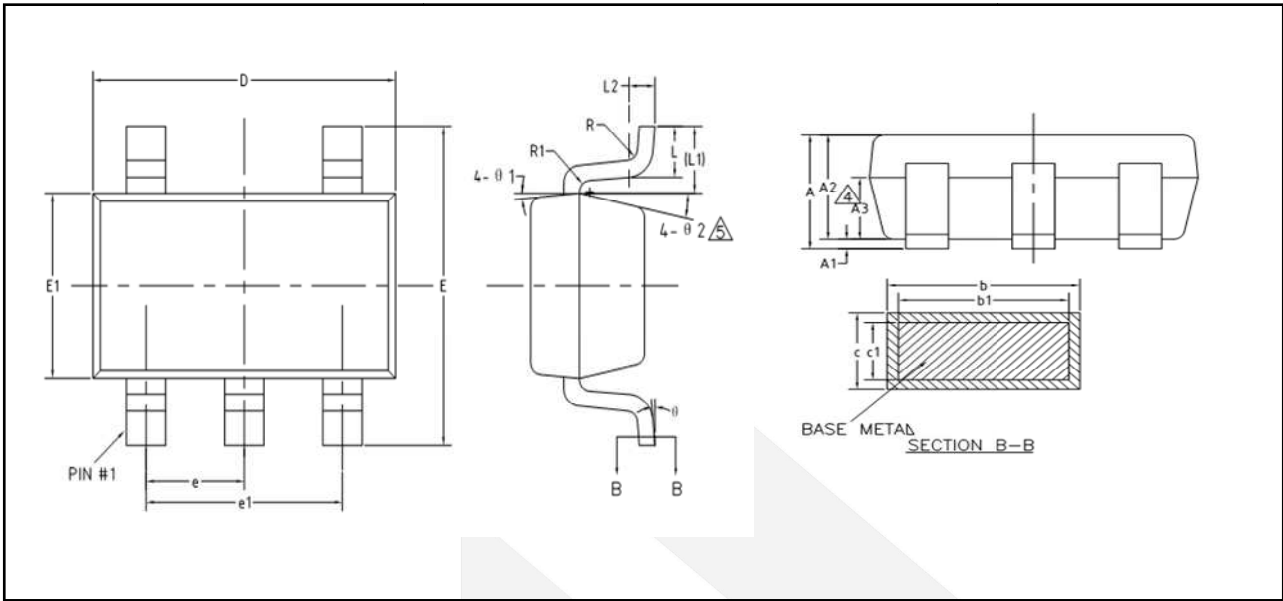
### Ordering Information

Order Part Number	Top Marking		$T_A$	Package	
DIO6011CD6	6011	Green	-40 to +85°C	DFN-6	Tape & Reel, 3000
DIO6011CST5	CYWZ	Green	-40 to +85°C	SOT23-5	Tape & Reel, 3000

### Marking Definition

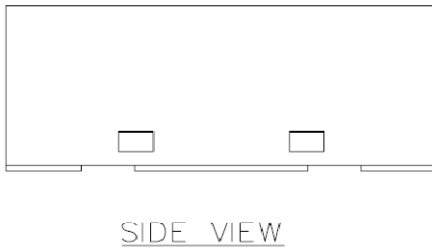
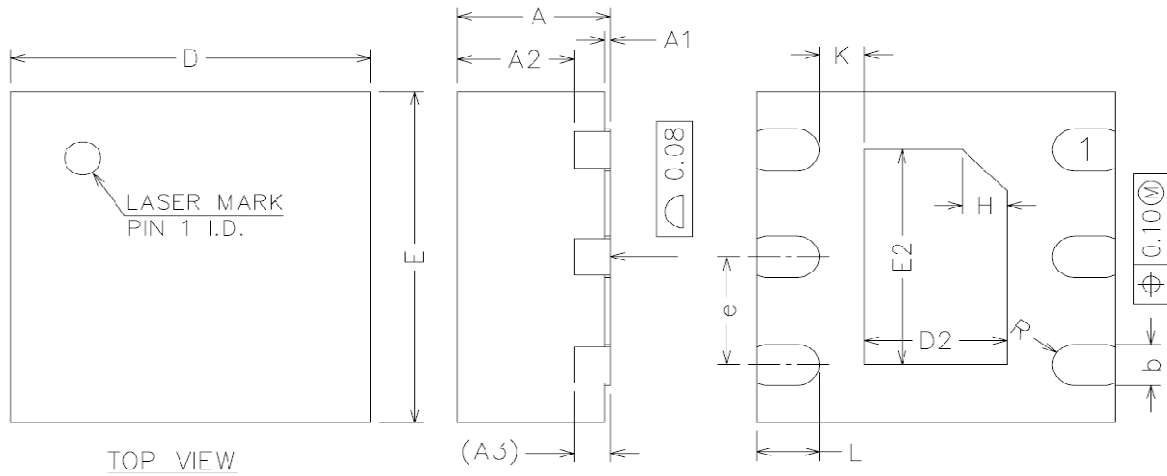


## Physical Dimensions: SOT-23-5



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°
θ1	3°	5°	7°
θ2	6°	-	14°

## Physical Dimensions: DFN-6



COMMON DIMENSIONS (UNITS OF MEASURE=MILLIMETER)			
Symbol	MIN	NOM	MAX
A	0.80	0.85	0.90
A1	0.00	0.02	0.05
A2	0.60	0.65	0.70
A3	0.20REF		
b	0.18	0.25	0.30
D	1.90	2.00	2.10
E	1.90	2.00	2.10
D2	0.70	0.80	0.90
E2	1.20	1.30	1.40
e	0.55	0.65	0.75
H	0.25REF		
K	0.20	-	-
L	0.30	0.35	0.40
R	0.11	-	-