



## DIO2591

### One-Channel, 11MHz, 6<sup>th</sup>-Order Standard Definition Video Filter

#### Features

- One-ch 6<sup>th</sup>-order 11MHz SD filters
- 6dB Output Driver Gain and Drive Dual Video Load
- Transparent Input Clamping
- AC or DC Coupled Inputs
- AC or DC Coupled Outputs
- Operates from 3.135 to 5.5V Single Power Supply
- Low Power (8mA/Channel)
- RoHS or Green SC70-6 SOT23-6 Package
- 8kV ESD protection

#### Applications

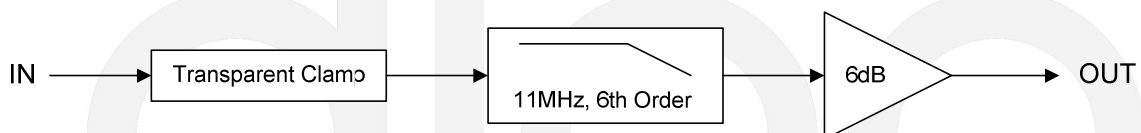
- DVD Players
- Video Amplifiers
- Cable set-top boxes
- Personal Video Recorders
- Communications Devices
- Video on Demand

#### Descriptions

DIO2591 is a low voltage, one channel video amplifier with integrated reconstruction filter and input clamps. DIO2591 provides improved image quality compared with passive LC filters and discrete drivers solution, especially suited for standard definition video signals, such as television and set-top box applications. DIO2591 integrates equivalent SAG function being able to drive 47uF capacitor directly under output AC-coupled mode. This reduces the BOM cost effectively with smaller PCB board size.

DIO2591 can be directly driven by a DC-coupled DAC output or an AC-coupled signal. The output in DIO2591 can also drive AC or DC coupled single (150Ω) or dual (75Ω) loads. The DC coupling capacitors can be removed.

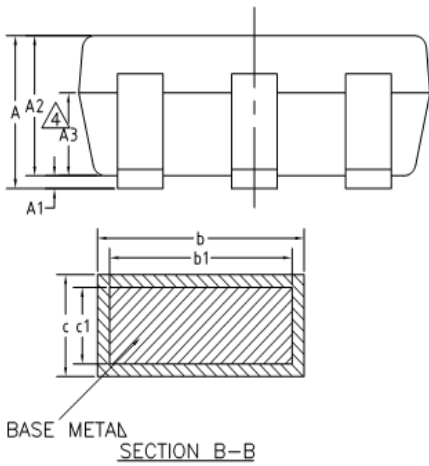
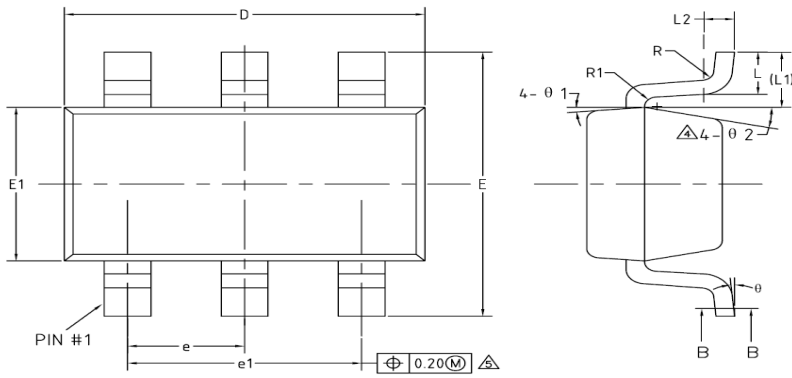
#### Block Diagram



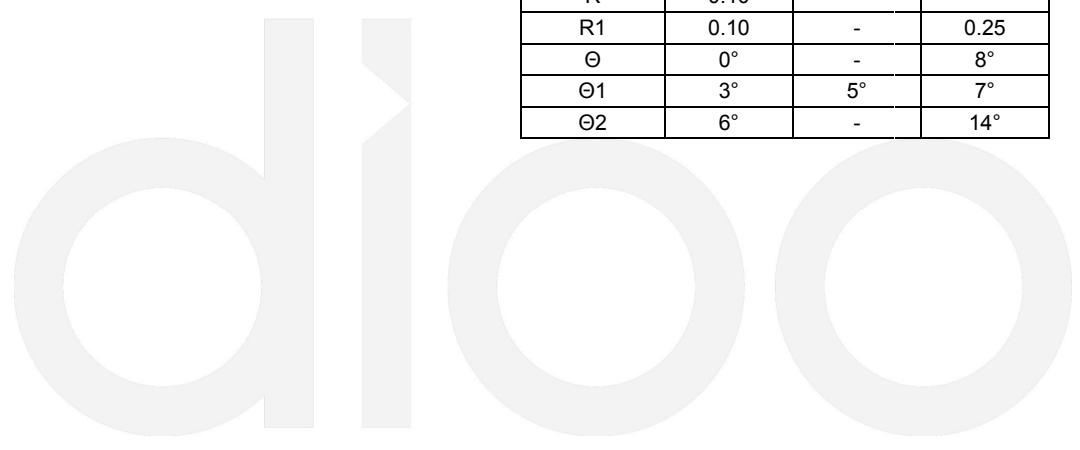
#### Ordering Information

Order Part Number	Top Marking		T <sub>A</sub>	Package	
DIO2591CST6	YW(X)Z	RoHS or Green	-40 to +85°C	SOT23-6	Tape & Reel, 3000
DIO2591SC6	YW(X)Z	RoHS or Green	-40 to +85°C	SC70-6	Tape & Reel, 3000

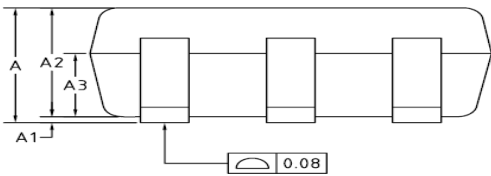
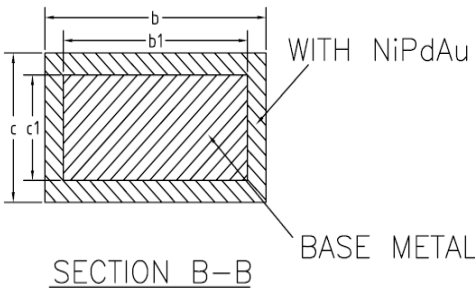
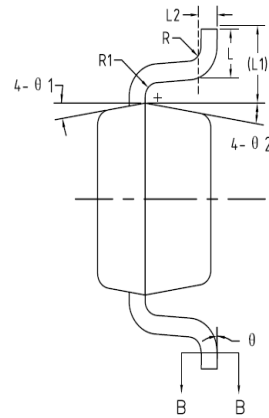
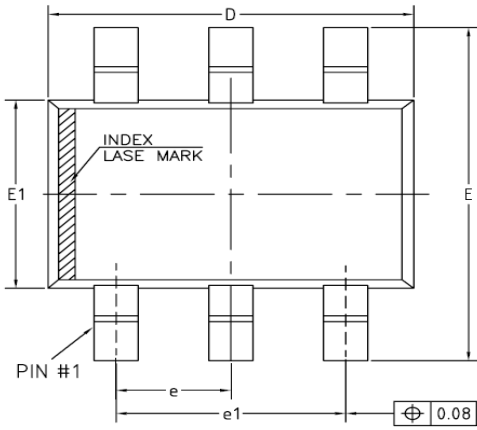
Physical Dimensions: SOT-23-6



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: SC70-6



COMMON DIMENSIONS (UNITS OF MEASURE=MILLIMETER)			
Symbol	MIN	NOM	MAX
A	0.85	-	1.05
A1	0	-	0.10
A2	0.80	0.90	1.00
A3	0.47	0.52	0.57
b	0.22	-	0.29
b1	0.22	0.25	0.28
c	0.115	-	0.15
c1	0.115	0.13	0.14
D	2.02	2.07	2.12
E	2.20	2.30	2.40
E1	1.25	1.30	1.35
e	0.65BSC		
e1	1.30BSC		
L	0.28	0.33	0.38
L1	0.50REF		
L2	0.15BSC		
R	0.10	-	-
R1	0.10	-	0.25
θ	0°	-	8°
θ1	6°	9°	12°
θ2	6°	9°	12°

## CONTACT US

**D**ioo 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.

