



# DIO2551B

## One-Channel, 9.5MHz, 6<sup>th</sup>-Order Standard Definition Video Filter Driver

### Features

- One-ch 6<sup>th</sup>-order 9.5MHz 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 3.135V to 5.5V Single Power Supply
- Low Power (8mA/Channel)
- RoHS or Green
- SOT23-5, SOIC-8 and SC70-5 Package
- 8kV ESD protection

### Applications

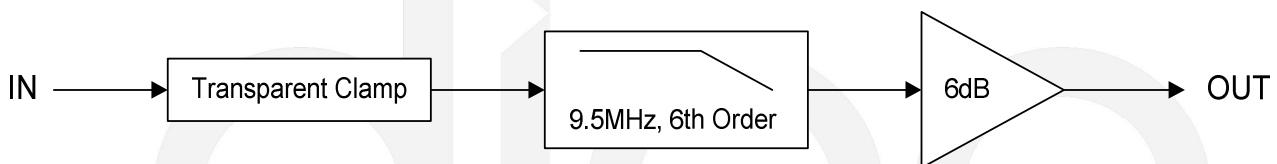
- DVD Players
- Video Amplifiers
- Cable set-top boxes
- Personal Video Recorders
- Communications Devices
- Video on Demand

### Descriptions

DIO2551B is a low voltage, one channel video amplifier with integrated reconstruction filter and input clamps. DIO2551B provides improved image quality compared with passive LC filters and discrete driver solution, especially suited for standard definition video signals, such as television and set-top box applications.

DIO2551B can be directly driven by a DC-coupled DAC output or an AC-coupled signal. Internal diode-like clamps and bias circuitry may be used if AC-coupled inputs are required. The output in DIO2551B can also drive AC or DC coupled single (150 $\Omega$ ) or dual (75 $\Omega$ ) loads. The DC coupling capacitors can be removed.

### Block Diagram



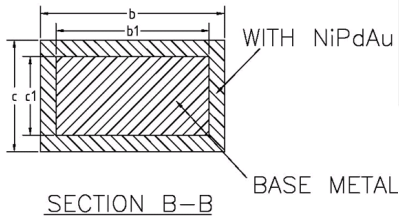
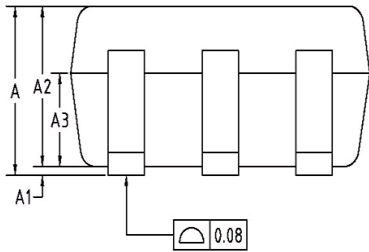
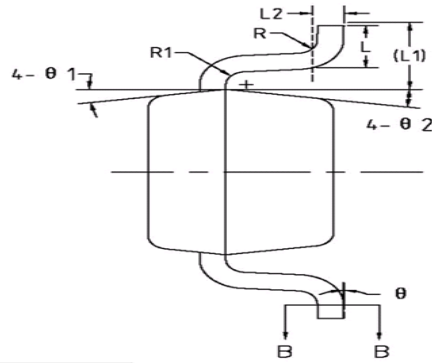
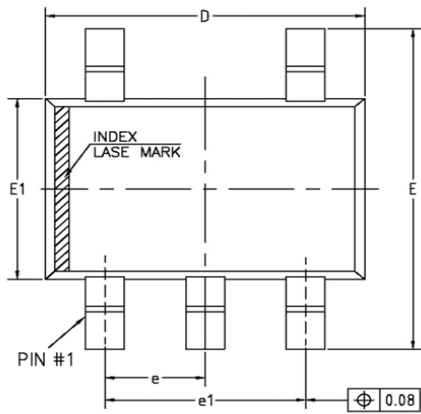
### Ordering Information

Order Part Number	Top Marking		T <sub>A</sub>	Package	
DIO2551BSO8	DIO2551B	RoHS or Green	-40 to +85°C	SOIC-8	Tape & Reel, 2500
DIO2551BSC5	YW(X)Z	RoHS or Green	-40 to +85°C	SC70-5	Tape & Reel, 3000
DIO2551BST5	YW(X)Z	RoHS or Green	-40 to +85°C	SOT23-5	Tape & Reel, 3000

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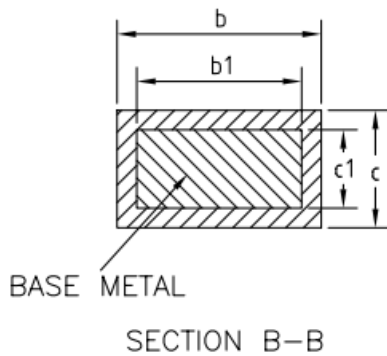
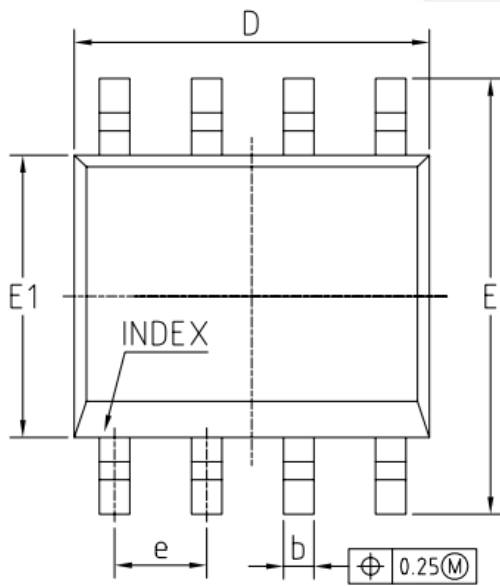
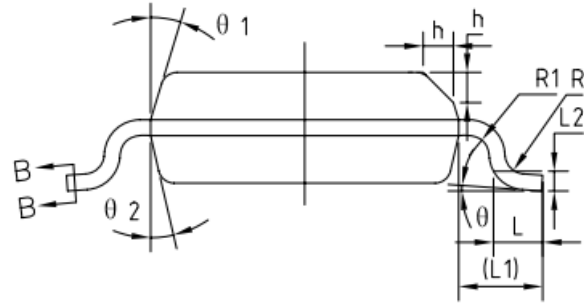
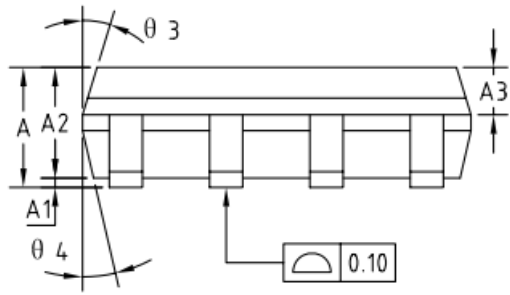
## Physical Dimensions: SC70-5



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°

# DIO2551B

## Physical Dimensions: SOIC-8



COMMON DIMENSIONS (UNITS OF MEASURE=MILLIMETER)			
Symbol	MIN	NOM	MAX
A	1.35	1.55	1.75
A1	0.10	0.15	0.25
A2	1.25	1.40	1.65
A3	0.50	0.60	0.70
b	0.38	-	0.51
b1	0.37	0.42	0.47
c	0.17	-	0.25
c1	0.17	0.20	0.23
D	4.80	4.90	5.00
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
e	1.27BSC		
L	0.45	0.60	0.80
L1	1.04REF		
L2	0.25BSC		
R	0.07	-	-
R1	0.07	-	-
h	0.30	0.40	0.50
θ	0°	-	8°
θ1	15°	17°	19°
θ2	11°	13°	15°
θ3	15°	17°	19°
θ4	11°	13°	15°