

# DIO2358

## Dual Channel RRIO, $V_{OS}>0$ , 1MHz, CMOS Amplifier

### Features

- Rail-to-Rail Input and Output
- 2.7mV Typical offset, two-ch  $V_{OS}>0$
- Unity Gain Stable
- Gain Bandwidth Product: 1MHz
- Very low input bias currents : 9pA
- Wide supply range: 3.0V to 5.5V
- Input Voltage Range:  
-0.1V to +5.6V with  $V+ = 5.5V$
- Ultra low power: 40 $\mu$ A per channel
- Small size packaging best for portable applications, available in SOIC-8 and MSOP-8

### Descriptions

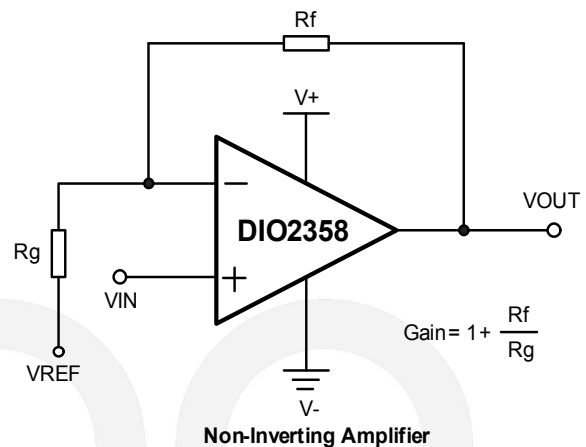
DIO2358 is dual channel rail-to-rail CMOS operational amplifiers with ultra low offset. Features include wide input common-mode voltage range and broad output voltage swing with operating supply voltage from 3.0V to 5.5V. Products are fully specified over the extended  $-40^{\circ}C$  to  $+125^{\circ}C$  temperature range.

DIO2358 provides 1MHz bandwidth consuming ultra low current of 80 $\mu$ A per channel. Very low input bias currents of 9pA enable the DIO2358 ideal for integrators, photodiode amplifiers, and piezoelectric sensors.

### Applications

- ASIC Input or Output Amplifier
- Sensor Interface
- Piezo Electric Transducer Amplifier
- Medical Instrumentation
- Audio Output
- Portable Systems
- Smoke Detectors
- Notebook PC
- Battery-Powered equipment

### Typical Application



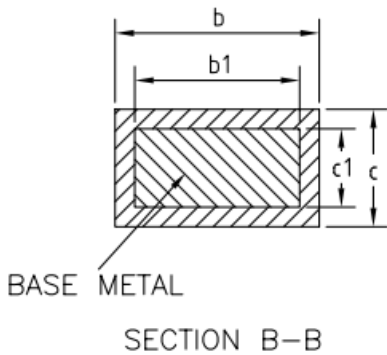
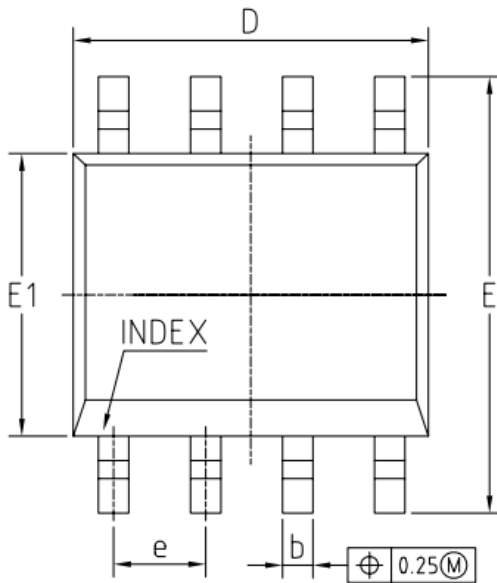
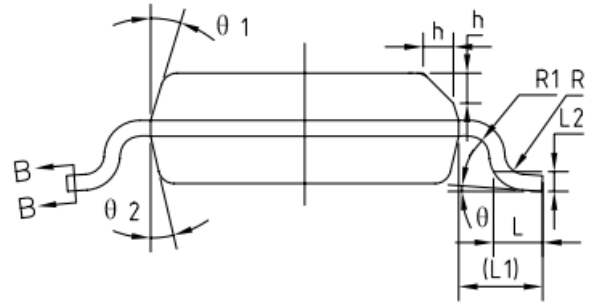
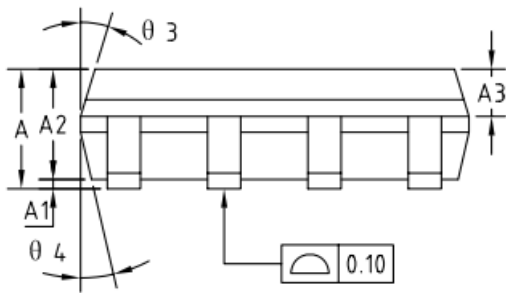
### Ordering Information

Order Part Number	Top Marking		$T_A$	Package	
DIO2358MP8	DIO2358	Green or RoHS	$-40$ to $+125^{\circ}C$	MSOP-8	Tape & Reel, 3000
DIO2358SO8	DIO2358	Green or RoHS	$-40$ to $+125^{\circ}C$	SOIC-8	Tape & Reel, 2500

# DIO2358

Dual Channel RRIO,  $V_{OS} > 0$ , 1MHz, CMOS Amplifier

## Physical Dimensions: SOIC-8

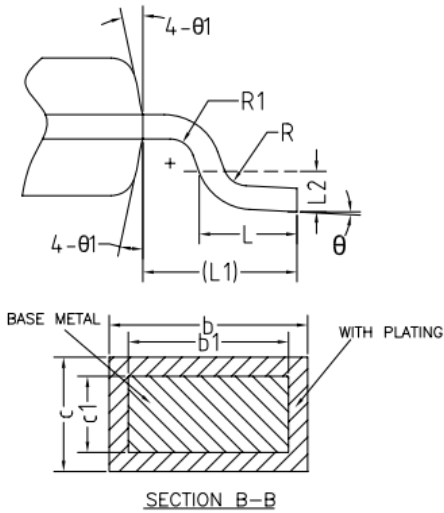
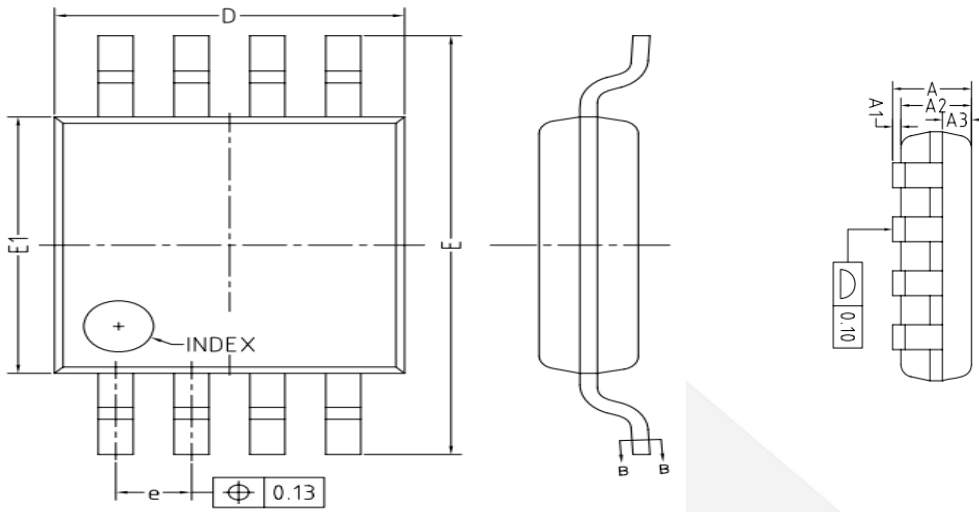


COMMON DIMENSIONS (UNITS OF MEASURE=MILLIMETER)			
Symbol	MIN	NOM	MAX
A	1.35	1.55	1.75
A1	0.10	0.15	0.25
A2	1.25	1.40	1.65
A3	0.50	0.60	0.70
b	0.38	-	0.51
b1	0.37	0.42	0.47
c	0.17	-	0.25
c1	0.17	0.20	0.23
D	4.80	4.90	5.00
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
e	1.27BSC		
L	0.45	0.60	0.80
L1	1.04REF		
L2	0.25BSC		
R	0.07	-	-
R1	0.07	-	-
h	0.30	0.40	0.50
$\theta$	0°	-	8°
$\theta 1$	15°	17°	19°
$\theta 2$	11°	13°	15°
$\theta 3$	15°	17°	19°
$\theta 4$	11°	13°	15°

# DIO2358

Dual Channel RRIO,  $V_{OS} > 0$ , 1MHz, CMOS Amplifier

## Physical Dimensions: MSOP-8



COMMON DIMENSIONS (UNITS OF MEASURE=MILLIMETER)			
Symbol	MIN	NOM	MAX
A	-	-	1.10
A1	0	-	0.15
A2	0.75	0.85	0.95
A3	0.25	0.35	0.39
b	0.28	-	0.37
b1	0.27	0.30	0.33
c	0.15	-	0.20
c1	0.14	0.15	0.16
D	2.90	3.00	3.10
E	4.70	4.90	5.10
E1	2.90	3.00	3.10
e	0.55	0.65	0.75
L	0.45	0.60	0.80
L1	0.95REF		
L2	0.25BSC		
R	0.07	-	-
R1	0.07	-	-
θ	0°	-	8°
θ1	9°	12°	15°