

Features

- Supply Voltage: 1.7 V to 3.6 V
- Low Power: 15 μ A at 25°C (Max)
- Low Offset Voltage: ± 30 μ V at 25°C (Max)
- Zero Drift: ± 0.025 μ V/°C
- Rail-to-Rail Input and Output
- Gain Bandwidth Product: 78 kHz
- Slew Rate: 20 V/ms

Applications

- Gas Detection
- Battery Current Sensing
- Portable Medical Equipment
- Portable Glucose Monitors
- Portable RFID Readers and Tags

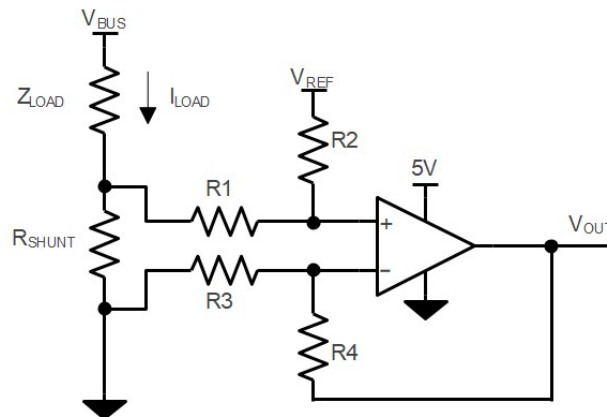
Description

The TPA552x is a series of low-power, zero-drift amplifiers with maximum 30- μ V low-offset voltage and stable frequency response for the high-precision sensing application that also requires low standby power.

The TPA552x devices provide rail-to-rail input and output. The devices have excellent AC performance with 78-kHz bandwidth, 20-V/ms slew rate while only drawing 9.8- μ A quiescent current per amplifier.

The TPA5521 and TPA5521U (1-ch version) are offered in the SOT23-5, DFN1 $\times$ 1.4-4, and SOT353 (SC70-5) packages. The TPA5522 (2-ch version) is available in the SOP8, TSSOP8, MSOP8, DFN1.5X1.5-8, and DFN2X2-8 packages. All versions can be operated over the industrial temperature range from -40°C to +125°C.

Typical Application Circuit



$$V_{OUT} = (I_{LOAD} \times R_{SHUNT}) \times (R2 / R1) + V_{REF}$$

When $R3 = R1$, $R2 = R4$, $R_{SHUNT} \ll R1$

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Revision History

Date	Revision	Notes
2023-01-23	Rev.A.0	Initial version.
2024-01-22	Rev.A.1	Modified the maximum value of I_Q at 25 °C: from 15 μ A to 12 μ A. Modified the maximum value of I_Q at -40 to 125 °C: from 20 μ A to 15 μ A. Modified the mean value of I_Q at 25 °C: from 9.8 μ A to 8 μ A.
2024-02-06	Rev.A.2	Modified the Pin Configuration of SOP8. The physical object has not changed, just a correction of handwriting errors.
2024-08-14	Rev.A.3	The following updates are all about the new datasheet formats or typos, and the actual product remains unchanged. • Updated Functional Block Diagram. • Updated pin configuration of TPA5521 and DFN1X1.4-4. • Updated Absolute Maximum Ratings: — Updated the maximum value of Input Voltage: from $(+V_S) + 0.3$ to 4. — Removed the minimum value of Differential Input Voltage. — Updated the maximum value of Differential Input Voltage: from $(+V_S) - (-V_S)$ to V_S.
2024-12-18	Rev.A.4	Corrected handwriting errors. The physical object has not changed.

Pin Configuration and Functions

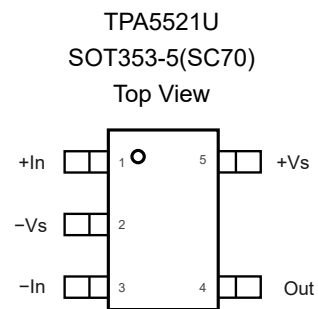
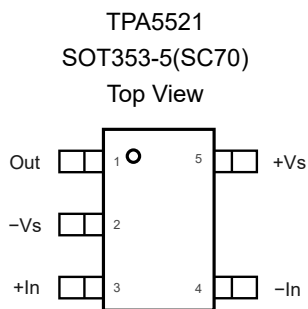
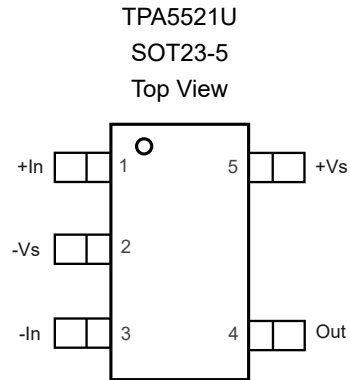
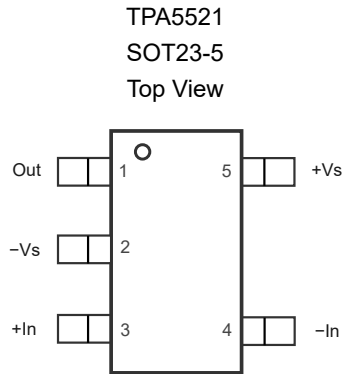


Table 1. Pin Functions: TPA5521, TPA5521U

Pin No.		Name	I/O	Description
TPA5521	TPA5521U			
1	4	Out	O	Output
2	2	-Vs	-	Negative power supply
3	1	+In	I	Noninverting input
4	3	-In	I	Inverting input
5	5	+Vs	-	Positive power supply

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers

TPA5521
DFN1X1.4-5
Top View

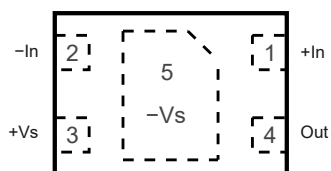
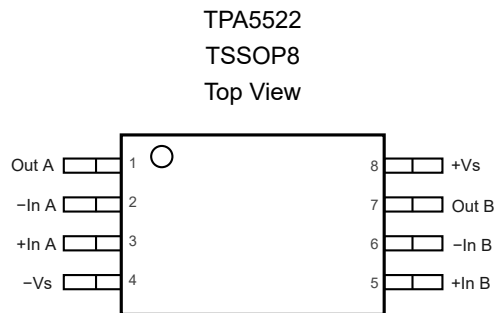
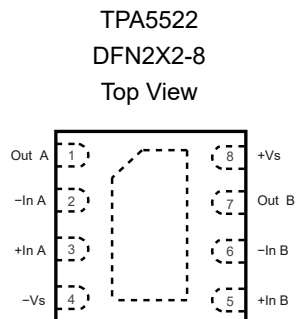
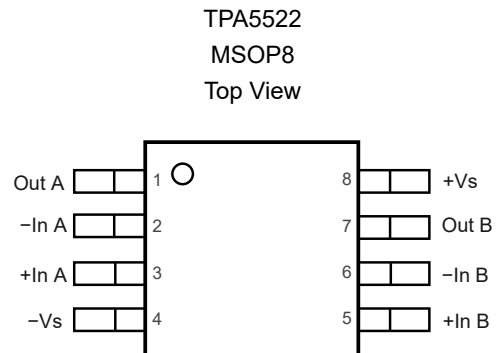
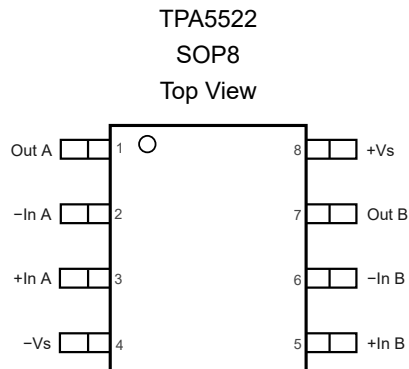


Table 2. Pin Functions: TPA5521

Pin No.	Name	I/O	Description
TPA5521			
1	+In	I	Noninverting input
2	-In	I	Inverting input
3	+Vs	-	Positive power supply
4	Out	O	Output
5	-Vs	-	Negative power supply

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers

Table 3. Pin Functions: TPA5522

Pin No.	Name	I/O	Description
1	Out A	O	Output
2	-In A	I	Inverting input
3	+In A	I	Noninverting input
4	-Vs	-	Negative power supply
5	+In B	I	Noninverting input
6	-In B	I	Inverting input
7	Out B	O	Output
8	+Vs		Positive power supply

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers

Specifications

Absolute Maximum Ratings ⁽¹⁾

All test conditions: over operating ambient temperature, unless otherwise noted.

Parameter		Min	Max	Unit
	Supply Voltage, $V_S = (+V_S) - (-V_S)$		4	V
	Input Voltage	$(-V_S) - 0.3$	4	V
	Differential Input Voltage		V_S	V
	Input Current: +IN, -IN ⁽²⁾	-10	+10	mA
	Output Voltage	$(-V_S) - 0.3$	$(+V_S) + 0.3$	V
	Output Short-Circuit Duration ⁽³⁾		Infinite	
T_J	Maximum Junction Temperature		150	°C
T_A	Operating Temperature Range	-40	125	°C
T_{STG}	Storage Temperature Range	-65	150	°C
T_L	Lead Temperature (Soldering 10 sec)		260	°C

- (1) Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. Exposure to any Absolute Maximum Rating condition for extended periods may affect device reliability and lifetime.
- (2) The inputs are protected by ESD protection diodes to the negative power supply. If the input extends more than 300 mV beyond the negative power supply, the input current should be limited to less than 10 mA.
- (3) A heat sink may be required to keep the junction temperature below the absolute maximum. This depends on the power supply voltage and how many amplifiers are shorted. Thermal resistance varies with the amount of PC board metal connected to the package. The specified values are for short traces connected to the leads.

ESD, Electrostatic Discharge Protection

Parameter		Condition	Minimum Level	Unit
HBM	Human Body Model ESD	ANSI/ESDA/JEDEC JS-001 ⁽¹⁾	3	kV
CDM	Charged Device Model ESD	ANSI/ESDA/JEDEC JS-002 ⁽²⁾	1.5	kV

- (1) JEDEC document JEP155 states that 500-V HBM allows safe manufacturing with a standard ESD control process.
- (2) JEDEC document JEP157 states that 250-V CDM allows safe manufacturing with a standard ESD control process.

Recommended Operating Conditions

Parameter		Min	Typ	Max	Unit
V _S	Supply Voltage, (+V _S) – (–V _S)	1.7		3.6	V
T _A	Operating Temperature Range	–40		125	°C

Thermal Information

Package Type	θ _{JA}	θ _{Jc}	Unit
SOT353 (SC70-5)	400	150	°C/W
SOT23-5	250	81	°C/W
SOP8	158	43	°C/W
MSOP8	210	45	°C/W
TSSOP8	191	44	°C/W
DFN1.5X1.5-8	200	100	°C/W
DFN2X2-8	100	60	°C/W

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers
Electrical Characteristics

All test conditions: $V_S = 3.3\text{ V}$, $T_A = 25^\circ\text{C}$, $R_L = 10\text{ k}\Omega$, $C_L = 100\text{ pF}$, unless otherwise noted.

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Power Supply						
V _S	Supply Voltage Range		1.7		3.6	V
I _Q	Quiescent Current per Amplifier	V _S = 3.3 V, V _{CM} = 1.65 V		8	12	μA
		V _S = 3.3 V, V _{CM} = 1.65 V, T _A = −40°C to 125°C			15	μA
PSRR	Power Supply Rejection Ratio	V _S = 1.7 V to 3.6 V, V _{CM} = 0 V	100	125		dB
		V _S = 1.7 V to 3.6 V, V _{CM} = 0 V, T _A = −40°C to 125°C	100			dB
Input Characteristics						
V _{OS}	Input Offset Voltage	V _S = 1.7 to 3.6 V, V _{CM} = 1 / V _S	−30	0.83	30	μV
		V _S = 1.7 to 3.6 V, V _{CM} = 1 / V _S , T _A = −40°C to 125°C	−30		30	μV
V _{OS} TC	Input Offset Voltage Drift	T _A = −40°C to 125°C		0.025		μV/°C
I _B	Input Bias Current			50		pA
		T _A = −40°C to 125°C		5000		pA
I _{OS}	Input Offset Current			50		pA
		T _A = −40°C to 125°C		5000		pA
R _{IN}				10 ¹⁰		Ω
C _{IN}	Input Capacitance	Differential Mode		5		pF
		Common Mode		5		pF
A _v	Open-Loop Voltage Gain	V _O = 0.1 V to 3.2 V	100	127		dB
		V _O = 0.1 V to 3.2 V, T _A = −40°C to 125°C	100			dB
V _{CMR}	Common-Mode Input Voltage Range	T _A = −40°C to 125°C	−V _S		+V _S	V
CMRR	Common-Mode Rejection Ratio	V _{CM} = 0 V to 3.3 V	90	130		dB
		V _{CM} = 0 V to 3.3 V, T = −40°C to 125°C	90			dB
Output Characteristics						
	Output Voltage Swing from Positive Rail or Negative Rail	R _{LOAD} = 100 kΩ to V _S / 2		2	15	mV
		R _{LOAD} = 100 kΩ to V _S / 2, T _A = −40°C to 125°C			15	mV
I _{SC}	Output Short-Circuit Current	Sink or Source		22		mA
		Sink or Source, T _A = −40°C to 125°C	15			mA
AC Specifications						

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
GBW	Gain-Bandwidth Product			78		kHz
SR	Slew Rate	G = 1, 2-V step		20		V/ms
PM	Phase Margin	R _L = 10 kΩ, C _L = 100 pF		60		°
GM	Gain Margin	R _L = 10 kΩ, C _L = 100 pF		10		dB
	Channel Separation	f = 1 kHz		120		dB
Noise Performance						
E _N	Input Voltage Noise	f = 0.1 Hz to 10 Hz		1.91		μV _{PP}
e _N	Input Voltage Noise Density	f = 100 Hz		96		nV/√Hz
i _N	Input Current Noise	f = 100 Hz		4		fA/√Hz

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers

Typical Performance Characteristics

All test conditions: $V_S = 3.3\text{ V}$, $T_A = 25^\circ\text{C}$, unless otherwise noted.

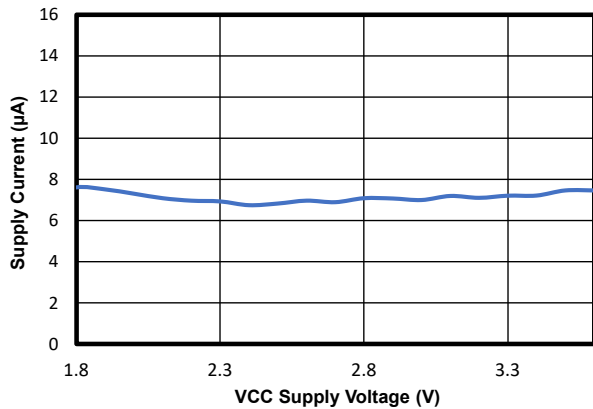


Figure 1. Supply Current vs. Supply Voltage, 1ch

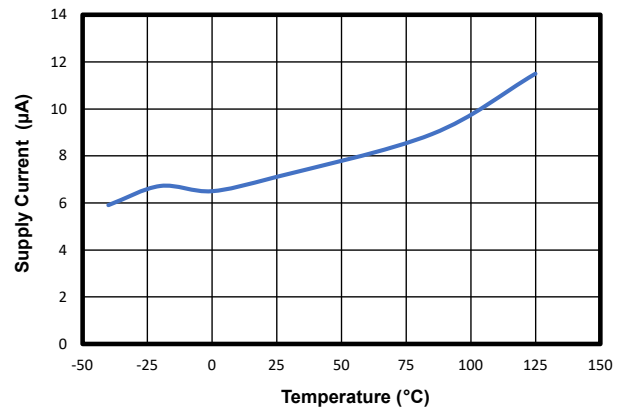


Figure 2. Supply Current vs. Temperature, 1ch

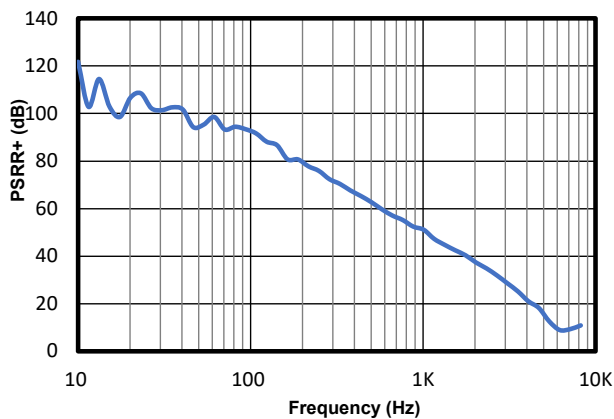


Figure 3. PSRR+ vs. Frequency

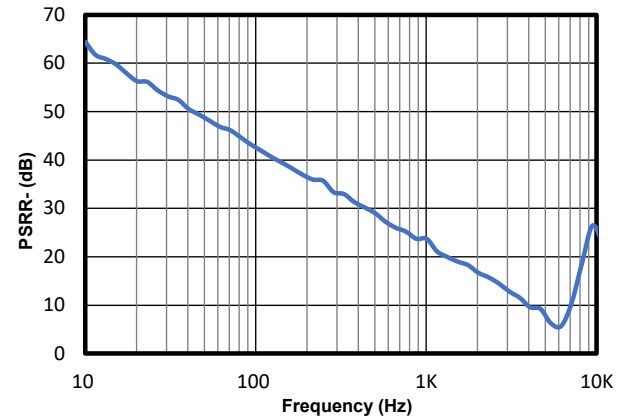


Figure 4. PSRR- vs. Frequency

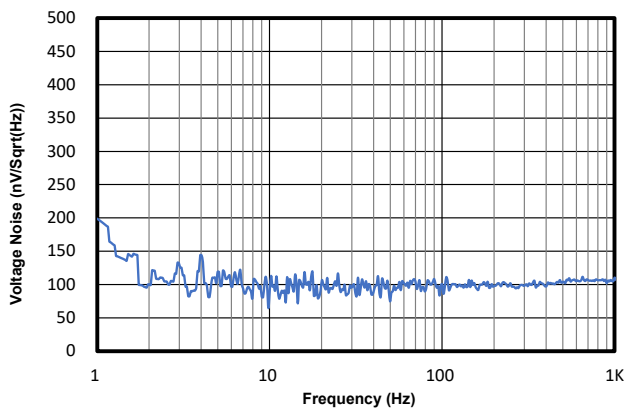


Figure 5. Voltage Noise Spectral Density vs. Frequency

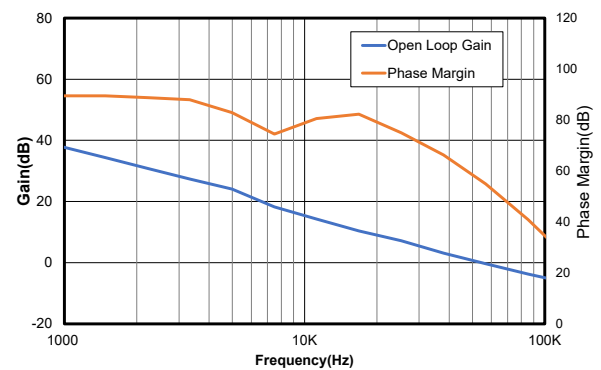
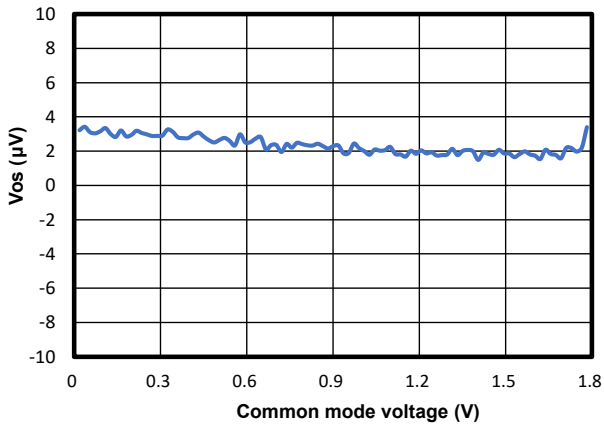
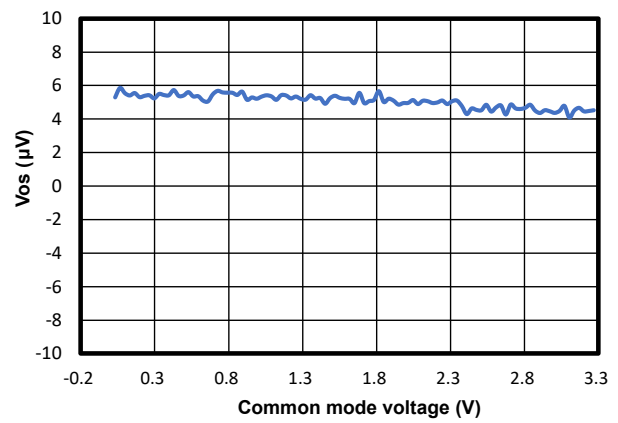
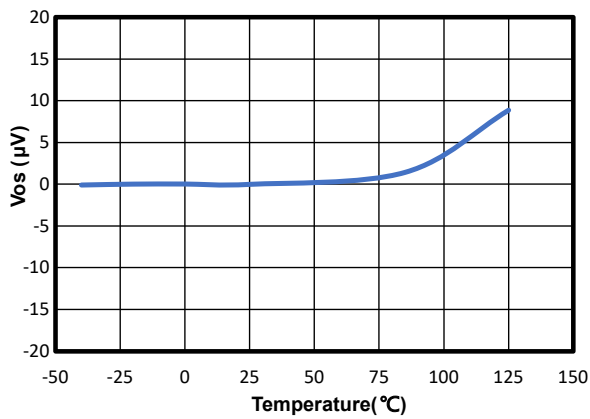
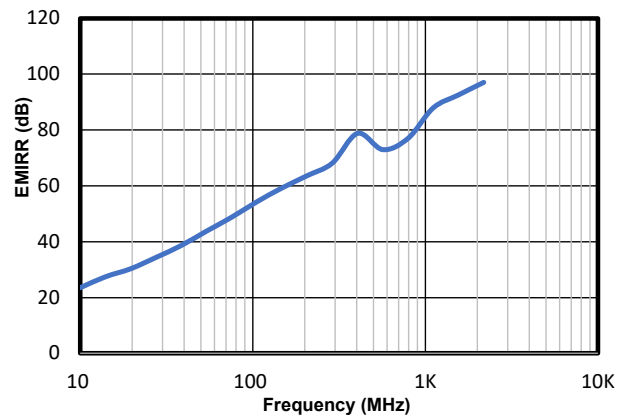
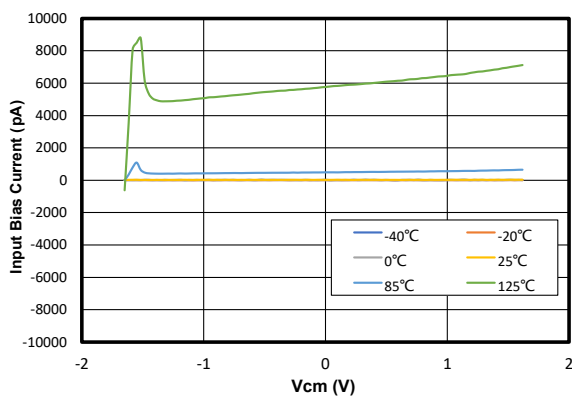
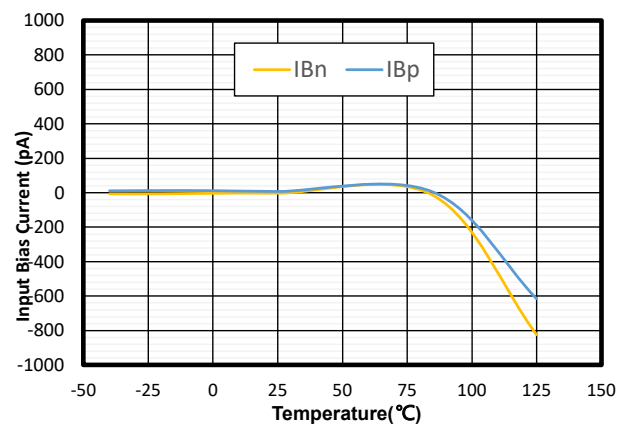
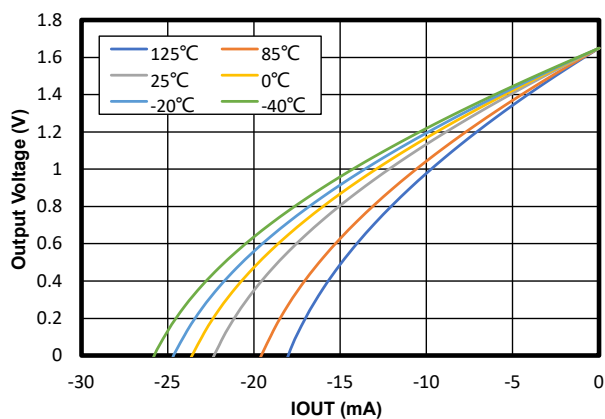
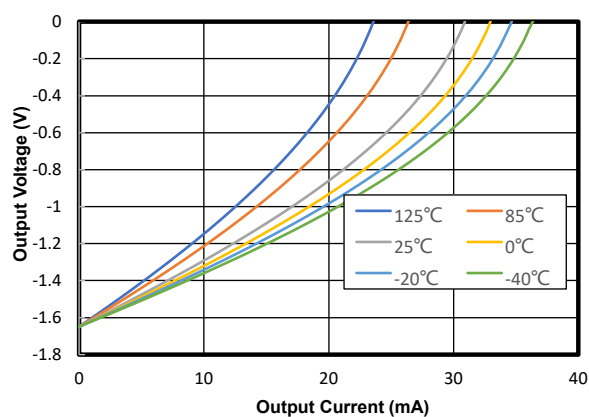
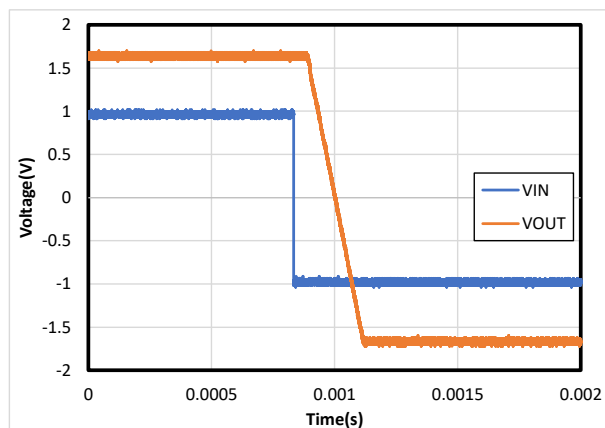
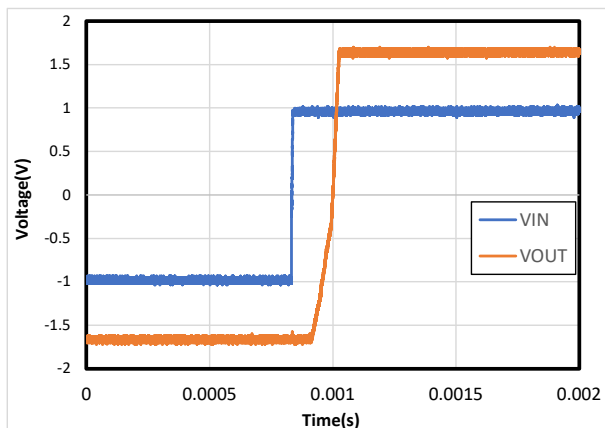
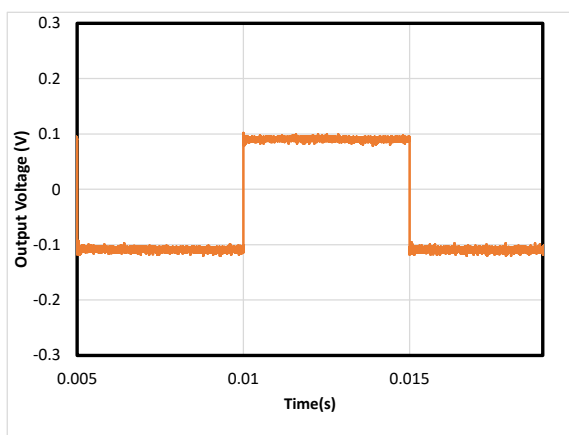
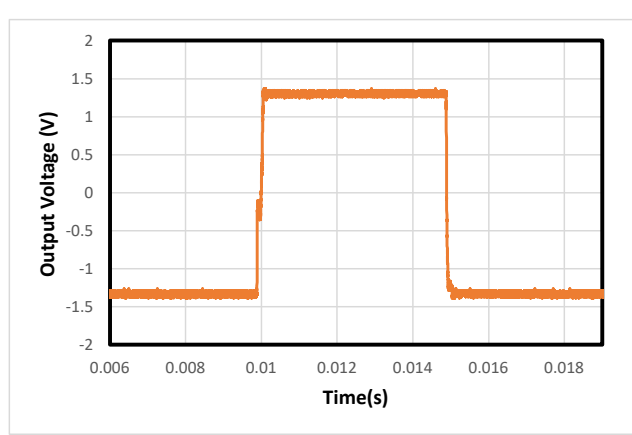


Figure 6. Open-Loop Gain and Phase Margin vs. Frequency, $R_L = 10\text{ k}\Omega$, $C_L = 100\text{ pF}$

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers

Figure 7. V_{OS} vs. V_{CM} , $V_S = 1.8\text{ V}$

Figure 8. V_{OS} vs. V_{CM} , $V_S = 3.3\text{ V}$

Figure 9. V_{OS} vs. Temperature

Figure 10. EMIRR vs. Frequency

Figure 11. I_B vs. Common-Mode Voltage

Figure 12. I_B vs. Temperature

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers

Figure 13. Output Voltage vs. Output Current

Figure 14. Output Voltage vs. Output Current

Figure 15. Overload Recovery at Negative Rail

Figure 16. Overload Recovery at Positive Rail

**Figure 17. 100-mV Small-Signal Step Response Voltage:
100 mV/div, Time: 20 ms/div**

**Figure 18. 1-V Large-Signal Step Response Voltage: 500
mV/div, Time: 20 ms/div**

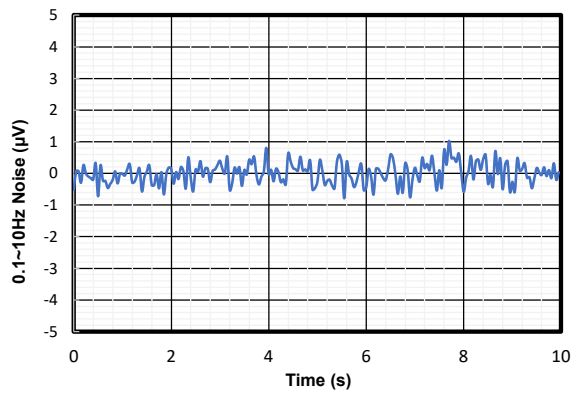


Figure 19. 0.1-Hz to 10-Hz Voltage Noise

Detailed Description

Overview

The TPA552x family of zero-drift amplifiers can operate on a single-supply voltage (1.7 V to 3.6 V), or a split-supply voltage. With the precision auto-calibration technique, these amplifiers achieve low input offset voltage and input offset voltage drift which can achieve outstanding input and output dynamic linearity. The strengths of TPA552x also include 78-kHz bandwidth, no 1/f noise, and only 9.8- μ A quiescent current, making the TPA552x suitable for many precisions, low power, and temperature-sensitive applications. Parameters that exhibit variance with regard to operating voltage or temperature are presented in [Electrical Characteristics](#).

Functional Block Diagram

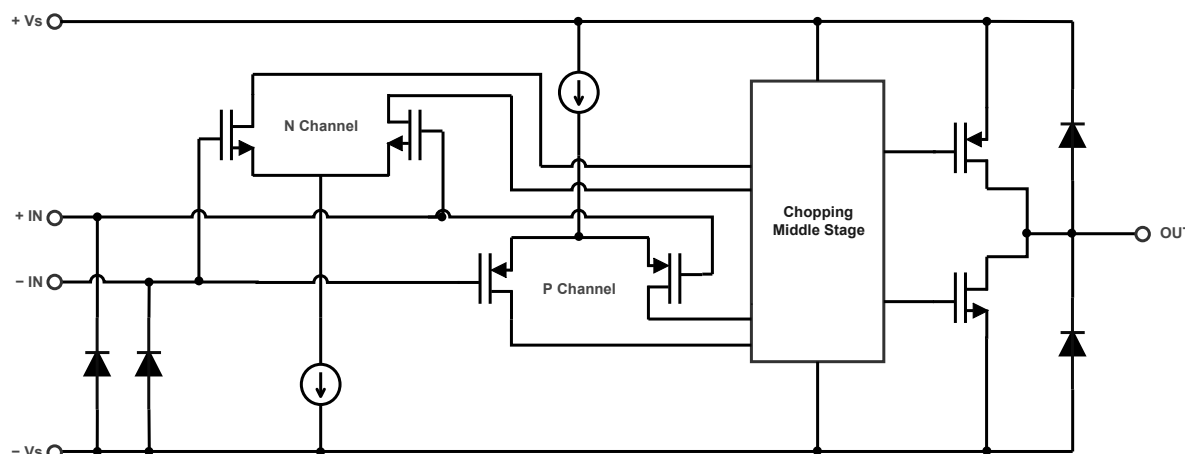


Figure 20. Functional Block Diagram

Feature Description

Operating Voltage

The devices are designed for single supply operation from 1.7 V to 3.6 V or dual supply operation from ± 0.85 V to ± 1.8 V.

Ultra Low Offset Voltage and Offset Voltage Drift in Operating Temperature Range

The devices provide 30- μ V offset voltage within the temperature range from -40°C to 125°C , which is achieved through the chopper stabilized technology. This unique topology allows the devices to maintain their low-offset voltage over a wide temperature range and over their operating lifetime.

Low 1/f Noise

Flicker noise, known as 1/f noise, is inherent in semiconductor devices and increases as the frequency decreases. The flicker noise provides higher degrees of error for low-frequency applications. The devices use the chopper stabilized technology to reduce flicker noise. This reduction in 1/f noise allows the devices to have lower noise at dc and low-frequency range compared to the standard amplifier.

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers**Residual Voltage Ripple**

The chopping technique can be used in the amplifier design due to the internal notch filter. Although the chopping-related voltage ripple is suppressed, a higher noise spectrum exists at the chopping frequency and its harmonics due to residual ripple.

The devices set the chopping frequency to 10 kHz. If the frequency of the input signal is close to the chopping frequency, the signal may be interfered with by the residue ripple. To suppress the noise at the chopping frequency, it is recommended that a post filter be placed at the output of the amplifier.

Rail-to-Rail Input

The input common-mode voltage range of the devices extends to the supply rails. This performance is achieved with a complementary input stage: a PMOS input differential pair in parallel with an NMOS input differential pair.

Rail-to-Rail Output

The devices deliver rail-to-rail output swing capability with a class-AB output stage. Different load conditions change the ability of the amplifier to swing close to the rails.

Application and Implementation

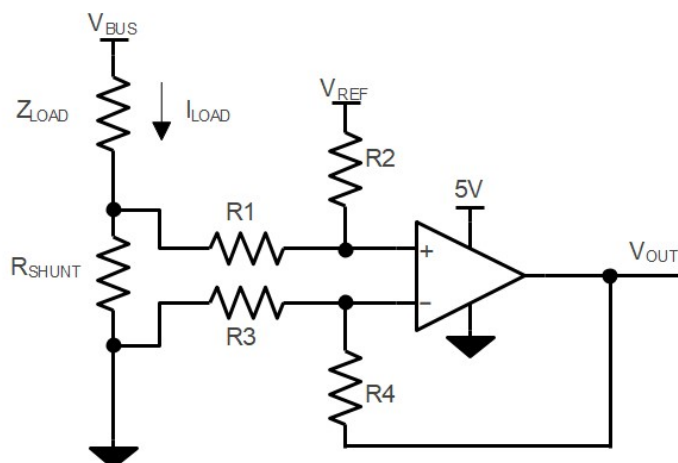
Note

Information in the following application sections is not part of the 3PEAK's component specification and 3PEAK does not warrant its accuracy or completeness. 3PEAK's customers are responsible for determining suitability of components for their purposes. Customers should validate and test their design implementation to confirm system functionality.

Application Information

Low-Side Current-Sensing Application

Figure 21 shows the device configured in a low-side current sensing application. The low-side current sensing method consists of placing a sense resistor between the load and the circuit ground. The voltage dropping across the resistor is amplified by different amplifier circuits with the device. The V_{REF} can be used to add bias voltage to the output voltage. Particular attention must be paid to the matching and precision of R1, R2, R3, and R4, to maximize the accuracy of the measurement.



$$V_{OUT} = (I_{LOAD} \times R_{SHUNT}) \times (R2 / R1) + V_{REF}$$

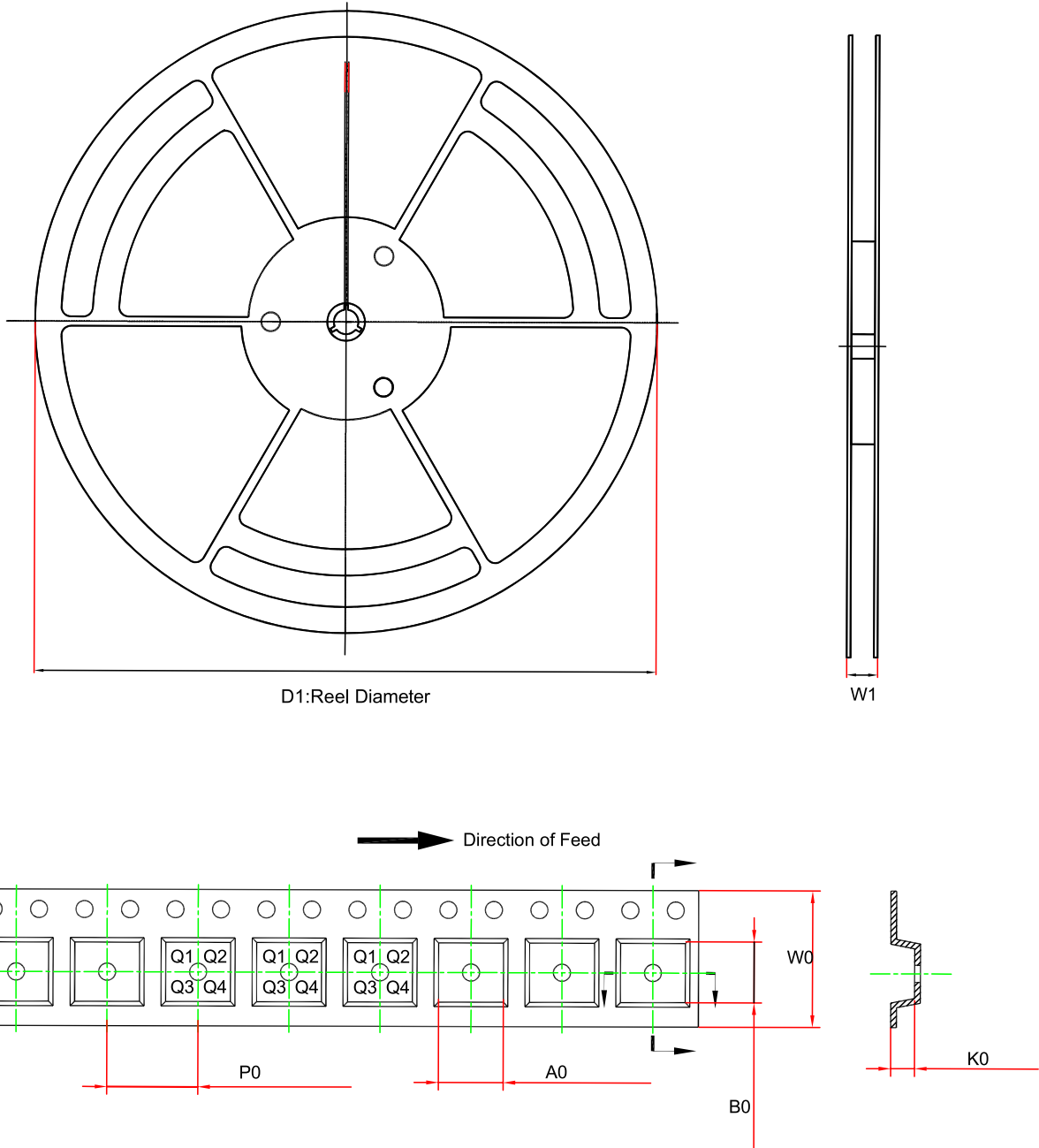
$$\text{When } R3 = R1, R2 = R4, R_{SHUNT} \ll R1$$

Figure 21. Low-Side Current-Sensing Application

Power Supply Recommendations

Place 0.1-μF bypass capacitors close to the power supply pins to reduce coupling errors from the noise or high-impedance power supplies.

Tape and Reel Information



Order Number	Package	D1 (mm)	W1 (mm)	A0 (mm) ⁽¹⁾	B0 (mm) ⁽¹⁾	K0 (mm) ⁽¹⁾	P0 (mm)	W0 (mm)	Pin1 Quadrant
TPA5521-S5TR	SOT23-5	180.0	12	3.3	3.25	1.4	4.0	8.0	Q3
TPA5521-DFPR	DFN1.4X1-4	180.0	13.1	1.15	1.6	0.5	4.0	8.0	Q1
TPA5522-SO1R	SOP8	330.0	17.6	6.5	5.4	2.0	8.0	12.0	Q1

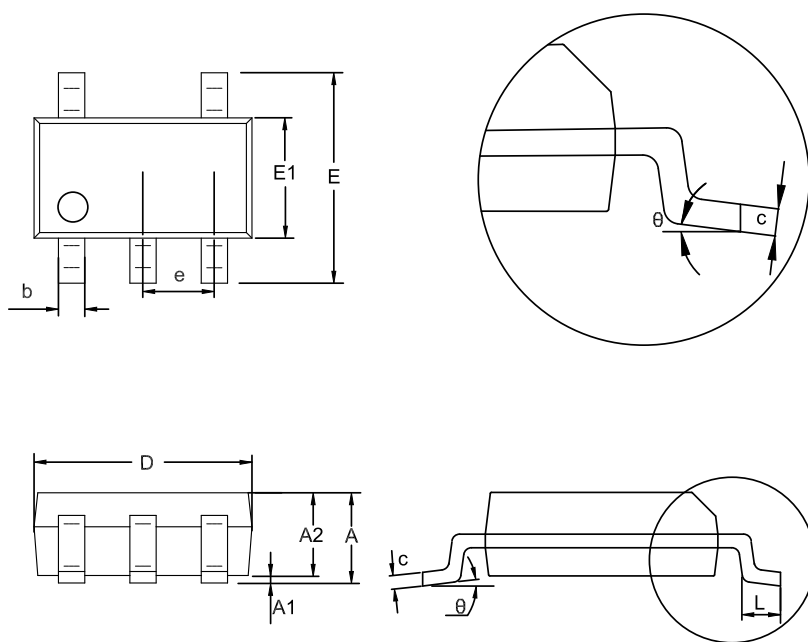
(1) The value is for reference only. Contact the 3PEAK factory for more information.

Package Outline Dimensions

SOT23-5

Package Outline Dimensions

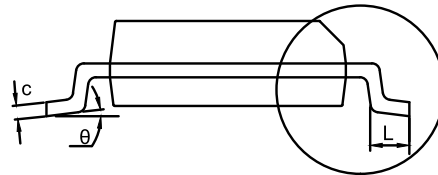
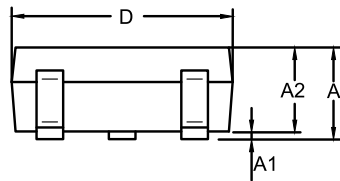
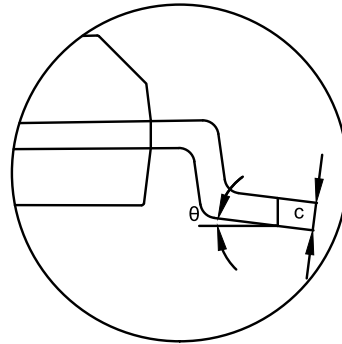
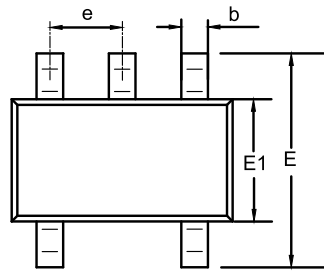
S5T(SOT23-5-A)



NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

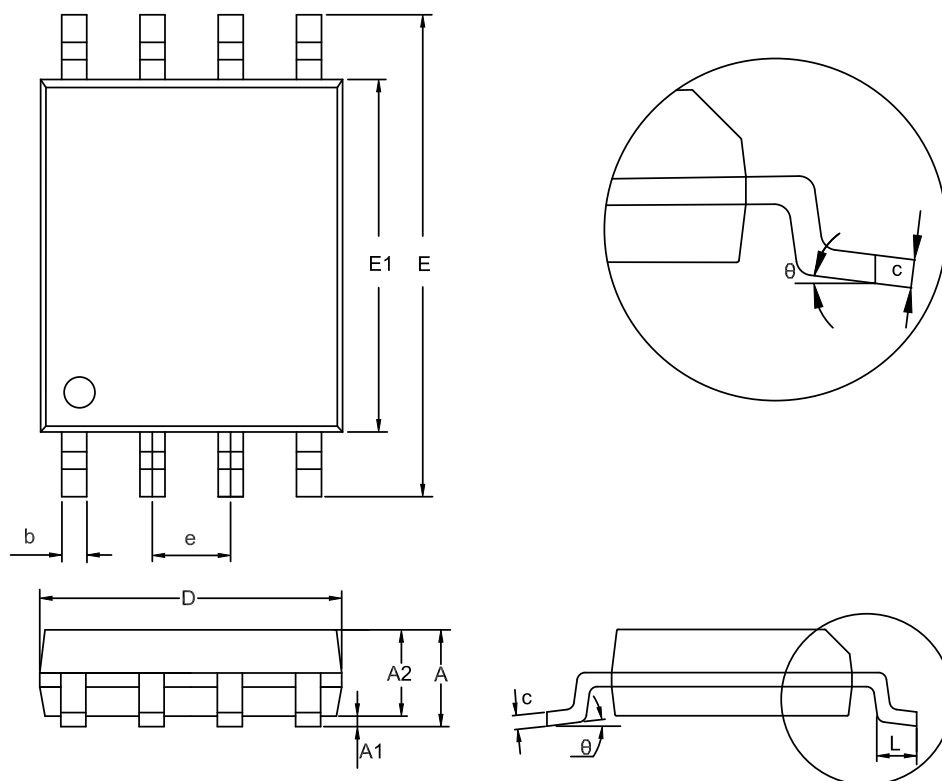
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	1.050	1.250	0.041	0.049
A1	0.000	0.150	0.000	0.006
A2	1.000	1.200	0.039	0.047
b	0.280	0.500	0.011	0.020
c	0.100	0.230	0.004	0.009
D	2.820	3.020	0.111	0.119
E	2.600	3.000	0.102	0.118
E1	1.500	1.720	0.059	0.068
e	0.950 BSC		0.037 BSC	
L	0.300	0.600	0.012	0.024
θ	0	8°	0	8°

SOT353 (SC70-5)
Package Outline Dimensions
SC5(SOT353-5-A)


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.850	1.100	0.033	0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.150	0.350	0.006	0.014
c	0.110	0.230	0.004	0.009
D	2.000	2.200	0.079	0.087
E	2.150	2.450	0.085	0.096
E1	1.150	1.350	0.045	0.053
e	0.650 BSC		0.026 BSC	
L	0.260	0.460	0.010	0.018
θ	0	8°	0	8°

NOTES

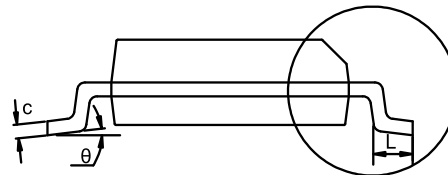
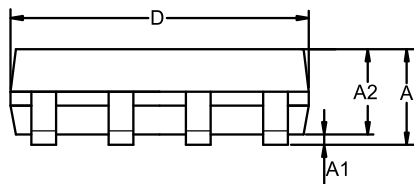
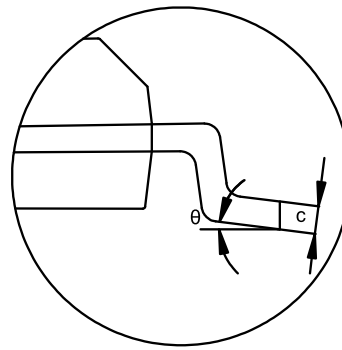
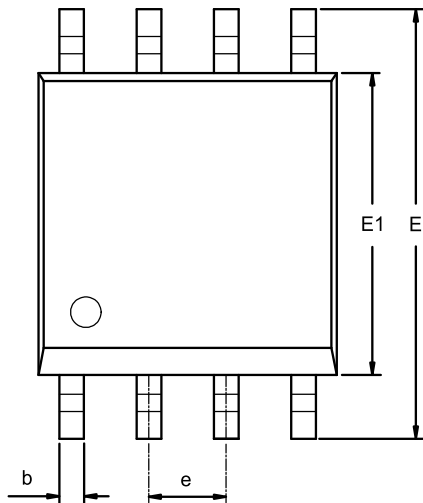
1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

TSSOP8
Package Outline Dimensions
TS1(TSSOP-8-A)


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.900	1.200	0.035	0.047
A1	0.050	0.150	0.002	0.006
A2	0.800	1.050	0.031	0.041
b	0.190	0.300	0.007	0.012
c	0.090	0.200	0.004	0.008
D	2.900	3.100	0.114	0.122
E	6.200	6.600	0.244	0.260
E1	4.300	4.500	0.169	0.177
e	0.650 BSC		0.026 BSC	
L	0.450	0.750	0.018	0.030
θ	0	8°	0	8°

NOTES

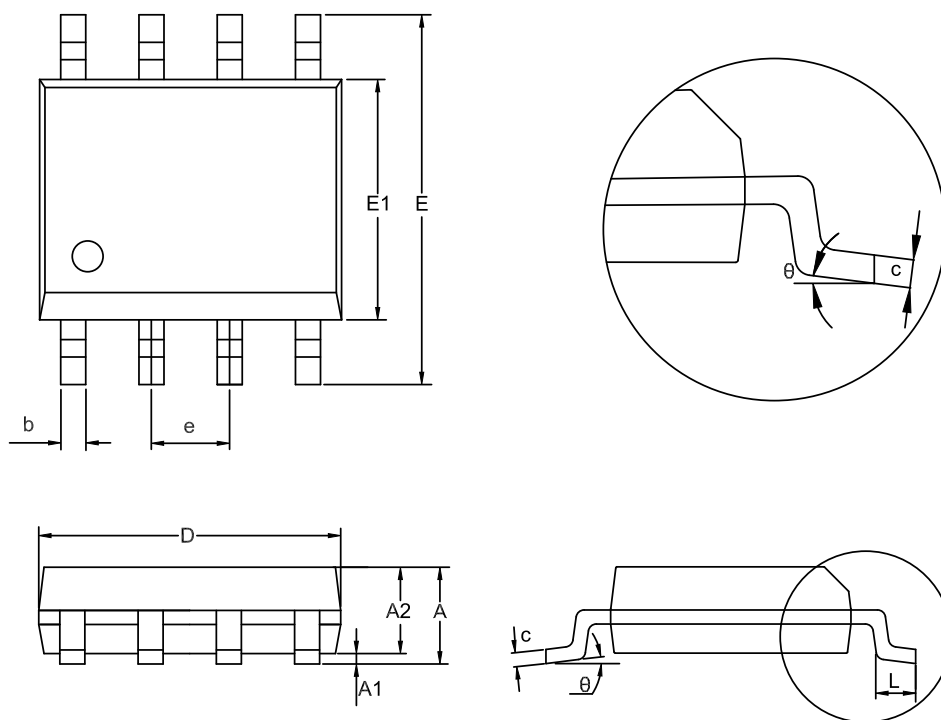
1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

MSOP8
Package Outline Dimensions
VS1(MSOP-8-A)


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.800	1.100	0.031	0.043
A1	0.020	0.150	0.001	0.006
A2	0.750	0.950	0.030	0.037
b	0.250	0.380	0.010	0.015
c	0.090	0.230	0.004	0.009
D	2.900	3.100	0.114	0.122
E	4.700	5.100	0.185	0.201
E1	2.900	3.100	0.114	0.122
e	0.650 BSC		0.026 BSC	
L	0.400	0.800	0.016	0.031
θ	0	8°	0	8°

NOTES

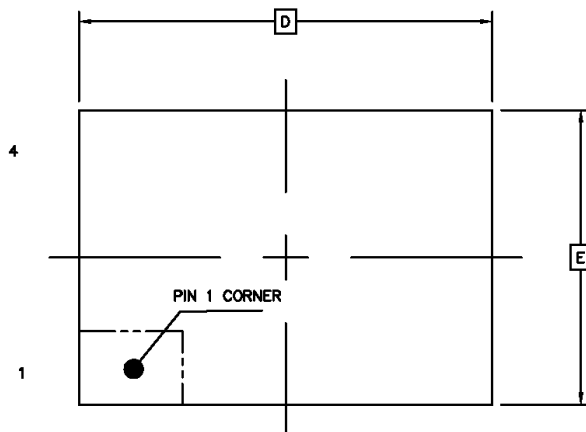
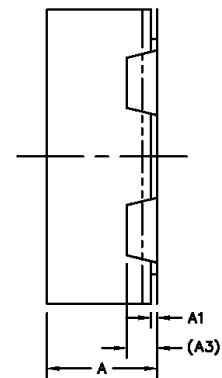
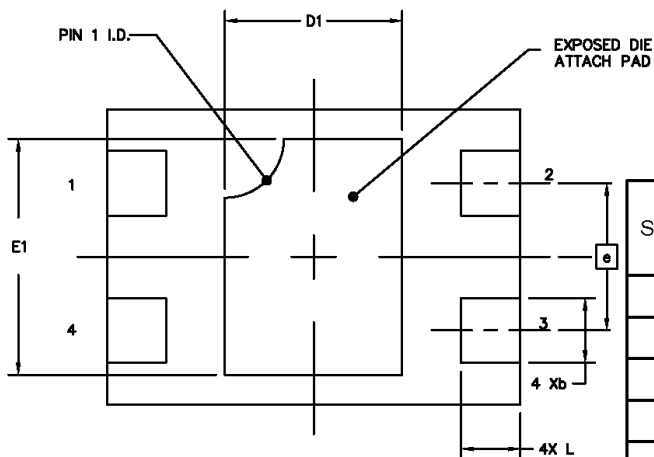
1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

SOP8
Package Outline Dimensions
SO1(SOP-8-A)


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	1.350	1.750	0.053	0.069
A1	0.050	0.250	0.002	0.010
A2	1.250	1.550	0.049	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.700	5.100	0.185	0.201
E	5.800	6.200	0.228	0.244
E1	3.800	4.000	0.150	0.157
e	1.270 BSC		0.050 BSC	
L	0.400	1.000	0.016	0.039
theta	0	8°	0	8°

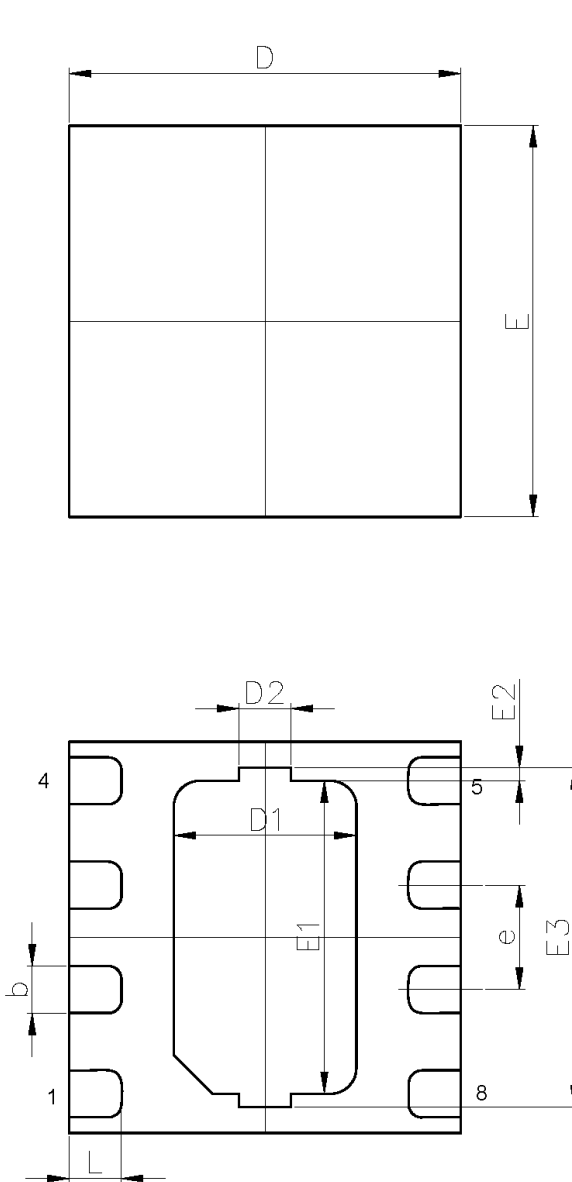
NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

DFN1X1.4-4
Package Outline Dimensions
DFA(DFN1X1.4-4-A)

TOP VIEW

SIDE VIEW

BOTTOM VIEW
NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

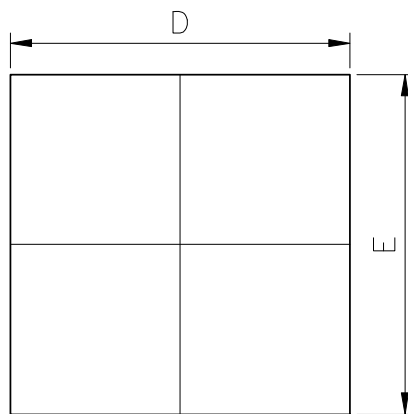
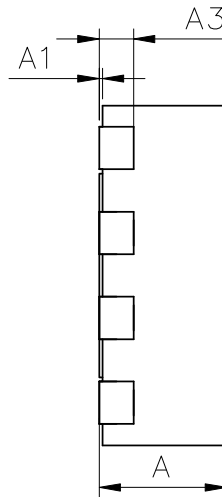
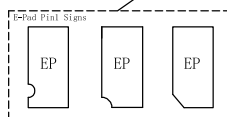
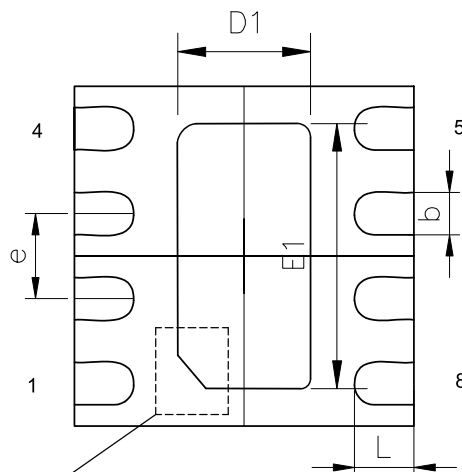
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.320	0.400	0.013	0.016
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
A3	0.102 REF		0.004 REF	
D	1.300	1.500	0.051	0.059
E	0.900	1.100	0.035	0.043
D1	0.500	0.700	0.020	0.028
E1	0.700	0.900	0.028	0.035
e	0.500 BSC		0.020 BSC	
L	0.150	0.250	0.006	0.010

DFN1.5X1.5-8
Package Outline Dimensions
DFS(DFN1.5X1.5-8-A)


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.400	0.500	0.016	0.020
A1	0.000	0.050	0.000	0.002
b	0.150	0.250	0.006	0.010
A3	0.127 REF		0.005 REF	
D	1.450	1.550	0.057	0.061
D1	0.600	0.800	0.024	0.031
D2	0.200 REF		0.008 REF	
E	1.450	1.550	0.057	0.061
E1	1.100	1.300	0.043	0.051
E2	0.050 REF		0.002 REF	
E3	1.200	1.400	0.047	0.055
e	0.400 BSC		0.016 BSC	
L	0.150	0.250	0.006	0.010

NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.

DFN2X2-8
Package Outline Dimensions
DFG(DFN2X2-8-E)

Top View

Side View

Bottom View
NOTES

1. Do not include mold flash or protrusion.
2. This drawing is subject to change without notice.
3. The many types of E-pad Pin1 signs may appear in the product.

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	0.500	0.600	0.020	0.024
A1	0.000	0.050	0.000	0.002
b	0.150	0.300	0.006	0.012
A3	0.100	0.200	0.004	0.008
D	1.900	2.100	0.075	0.083
D1	0.800	1.000	0.031	0.039
E	1.900	2.100	0.075	0.083
E1	1.600	1.800	0.063	0.071
e	0.500 BSC		0.020BSC	
L	0.224	0.376	0.009	0.015

3.3-V, 78-kHz, Zero-Drift, Low-Power Operational Amplifiers

Order Information

Order Number	Operating Temperature Range	Package	Marking Information	MSL	Transport Media, Quantity	Eco Plan
TPA5521-DFPR	–40 to 125°C	DFN1.4X1-4	52	3	Tape and Reel, 4000	Green
TPA5521-SC5R ⁽¹⁾	–40 to 125°C	SOT353 (SC70-5)	521	3	Tape and Reel, 3000	Green
TPA5521U-SC5R ⁽¹⁾	–40 to 125°C	SOT353 (SC70-5)	52U	3	Tape and Reel, 3000	Green
TPA5521-S5TR	–40 to 125°C	SOT23-5	521	3	Tape and Reel, 3000	Green
TPA5521U-S5TR ⁽¹⁾	–40 to 125°C	SOT23-5	52U	3	Tape and Reel, 3000	Green
TPA5522-DFSR ⁽¹⁾	–40 to 125°C	DFN1.5X1.5-8	52	3	Tape and Reel, 4000	Green
TPA5522-SO1R	–40 to 125°C	SOP8	A5522	3	Tape and Reel, 4000	Green
TPA5522-DFGR ⁽¹⁾	–40 to 125°C	DFN2X2-8	552	3	Tape and Reel, 3000	Green
TPA5522-TS1R ⁽¹⁾	–40 to 125°C	TSSOP8	A5522	3	Tape and Reel, 3000	Green
TPA5522-VS1R ⁽¹⁾	–40 to 125°C	MSOP8	A5522	3	Tape and Reel, 3000	Green

(1) For future products, contact the 3PEAK factory for more information and samples.

Green: 3PEAK defines "Green" to mean RoHS compatible and free of halogen substances.

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