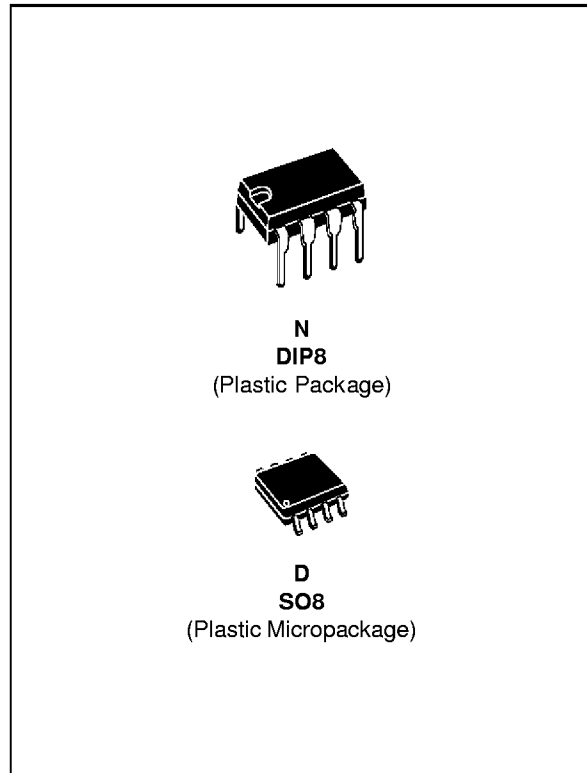


**HIGH OUTPUT SWING - LOW NOISE
DUAL OPERATIONAL AMPLIFIER**

PRODUCT PREVIEW

- VERY LOW NOISE LEVEL : $4\text{nV}\sqrt{\text{Hz}}$
- ULTRA LOW DISTORTION : **0.003%**
- HIGH GAIN BANDWIDTH PRODUCT : **12MHz**
- TYPICAL SLEW RATE : **4V/μs**
- LARGE OUTPUT SWING
($\pm 2.4\text{V}$ @ $V_{CC} = \pm 2.5\text{V}$)

- ESD TOLERANCE : 2kV
- LATCH-UP IMMUNITY



DESCRIPTION

The TS462 is a dual operational amplifier able to operate with voltages as low as $\pm 1.35\text{V}$ and to reach a minimum of $\pm 2\text{V}_{pp}$ of output swing (when supplied with $\pm 2.5\text{V}$).

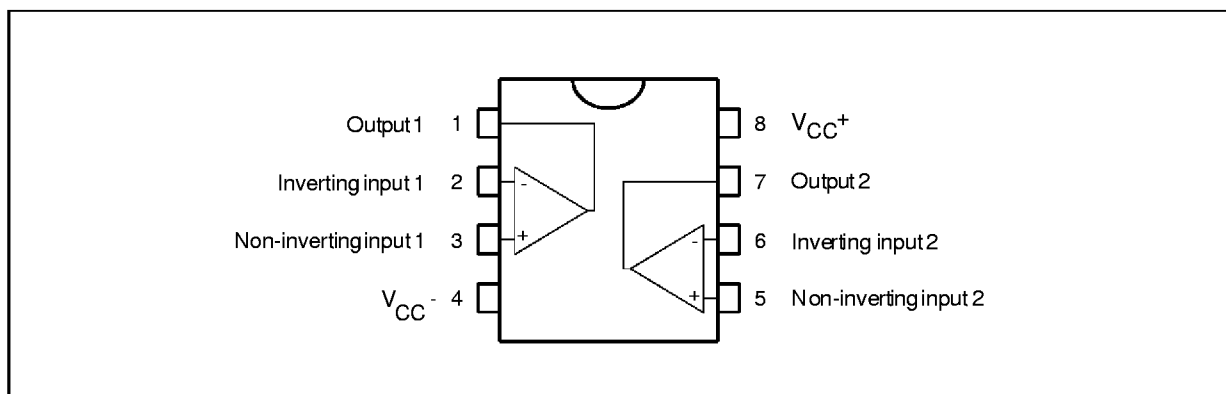
This device is well-suited for every kind of portable and battery-supplied equipment in which low noise and low distortion are a key.

The TS462 is a cost-attractive access to the range of the Rail to Rail op-amps from SGS-THOMSON (TS9xx serie).

ORDER CODES

Part Number	Temperature Range	Package	
		N	D
TS462I	-20, +70°C	•	•

PIN CONNECTIONS (top view)



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	Supply Voltage	±6	V
V _{id}	Differential Input Voltage - note 1	±V _{CC}	V
T _{oper}	Operating Free Air Temperature Range	-20 to 70	°C
T _{stg}	Storage Temperature	-65 to +150	°C

Note : 1. Either or both input voltages must not exceed the magnitude of V_{CC}⁺ or V_{CC}⁻

OPERATING CONDITIONS

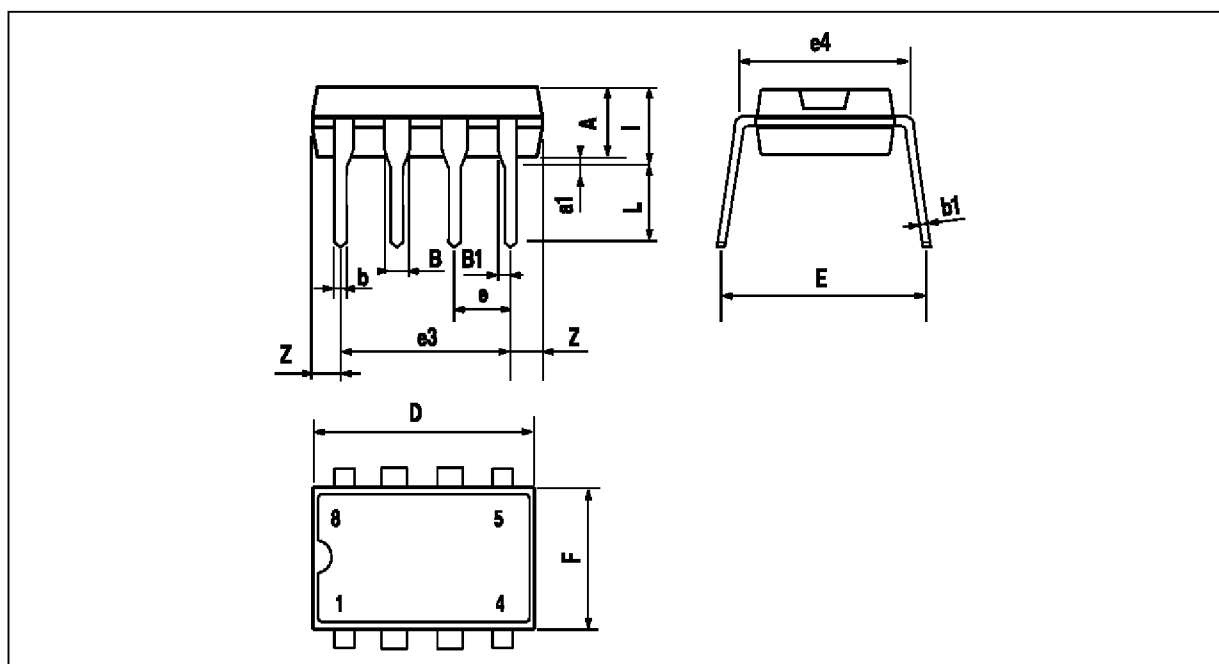
Symbol	Parameter	Value	Unit
V _{CC}	Supply Voltage	±1.35 to ±5	V

ELECTRICAL CHARACTERISTICS

V_{CC}⁺ = +2.5V, V_{CC}⁻ = -2.5V, T_{amb} = 25°C (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
V _{io}	Input Offset Voltage V _{ic} = 0V, V _o = 0V			5	mV
DV _{io}	Input Offset Voltage Drift V _{ic} = 0V, V _o = 0V		2		µV/°C
I _{io}	Input Offset Current V _{ic} = 0V, V _o = 0V		10	150	nA
I _{ib}	Input Bias Current V _{ic} = 0V, V _o = 0V		250	750	nA
V _{icm}	Common Mode Input Voltage Range	±1.35	±1.5		V
CMR	Common Mode Rejection Ratio V _{ic} = ±1.35V	60	85		dB
SVR	Supply Voltage Rejection Ratio V _{CC} = ±2V to ±3V	50	70		dB
V _{oh}	High Level Output Voltage V _{id} = 100mV R _L = 2k	2	2.4		V
V _{ol}	Low Level Output Voltage V _{id} = -100mV R _L = 2k		-2.4	-2	V
A _{vd}	Large Signal Voltage Gain R _L = 2k	60	80		dB
GBP	Gain Bandwidth Product f = 100kHz, R _L = 2kΩ, C _L = 100pF	8.2	12		MHz
∅ _m	Phase Margin R _L = 2kΩ, C _L = 100pF		55		Degrees
G _m	Gain Margin		10		dB
SR	Slew Rate A _v = 1, V _{in} = ±1V	2.8	4		V/µs
I _{CC}	Supply Current per Amplifier Unity gain - no load		2	2.8	mA
e _n	Equivalent Input Noise Voltage f = 100kHz		4		$\frac{nV}{\sqrt{Hz}}$
THD	Total Harmonic Distortion f = 1kHz, A _v = 40dB, R _L = 10kΩ		0.003		%

PACKAGE MECHANICAL DATA
8 PINS - PLASTIC DIP

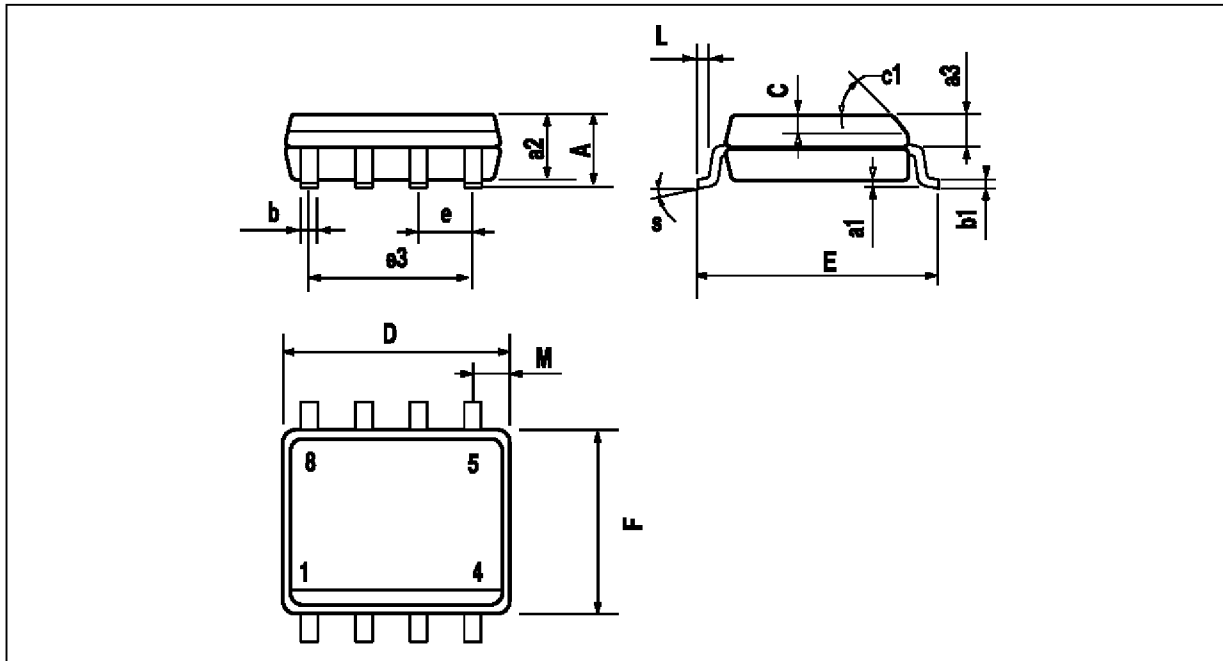


PM-DIP8.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		3.32			0.131	
a1	0.51			0.020		
B	1.15		1.65	0.045		0.065
b	0.356		0.55	0.014		0.022
b1	0.204		0.304	0.008		0.012
D			10.92			0.430
E	7.95		9.75	0.313		0.384
e		2.54			0.100	
e3		7.62			0.300	
e4		7.62			0.300	
F			6.6			0.260
i			5.08			0.200
L	3.18		3.81	0.125		0.150
Z			1.52			0.060

DIP8.TBL

PACKAGE MECHANICAL DATA
8 PINS - PLASTIC MICROPACKAGE (SO)



PM-SO8.EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.75			0.069
a1	0.1		0.25	0.004		0.010
a2			1.65			0.065
a3	0.65		0.85	0.026		0.033
b	0.35		0.48	0.014		0.019
b1	0.19		0.25	0.007		0.010
C	0.25		0.5	0.010		0.020
c1	45° (typ.)					
D	4.8		5.0	0.189		0.197
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		3.81			0.150	
F	3.8		4.0	0.150		0.157
L	0.4		1.27	0.016		0.050
M			0.6			0.024
S	8° (max.)					

SG8.TBL

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