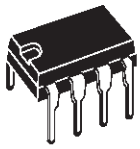
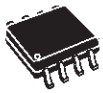
TS462

HIGH OUTPUT SWING DUAL OPERATIONAL AMPLIFIER

- HIGH DYNAMIC PERFORMANCE
- LOW NOISE LEVEL : **4nV/√Hz**
- LOW DISTORTION : **0.003%**
- LARGE OUTPUT SWING
  (±2.4V @V_{CC} = ±2.5V)



N
DIP8
(Plastic Package)



D
SO8
(Plastic Micropackage)

P
TSSOP8
(Thin Shrink Small Outline Package)

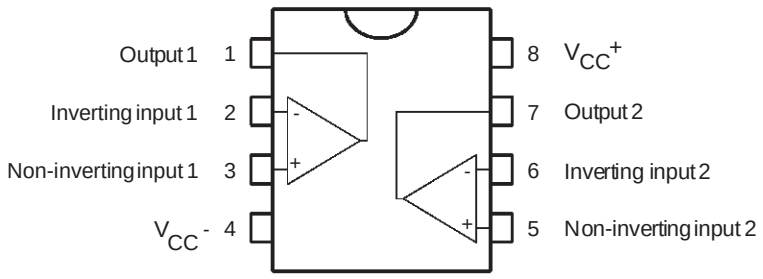
DESCRIPTION

The TS462 is a dual operational amplifier able to operate with voltages as low as ±1.35V. It can deliver a minimum of ±2Vpp of output swing (when supplied with ±2.5V).
This device is well-suited to applications in portable and battery supplied equipment in which low noise and low distortion are critical.
The TS462 is a cost attractive access to the range of high performance Rail to Rail op-amps from STMicroelectronics (TS9xx series).

ORDER CODES

Part Number	Temperature Range	Package		
		N	D	P
TS462C	-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	$\pm V_{CC}$	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

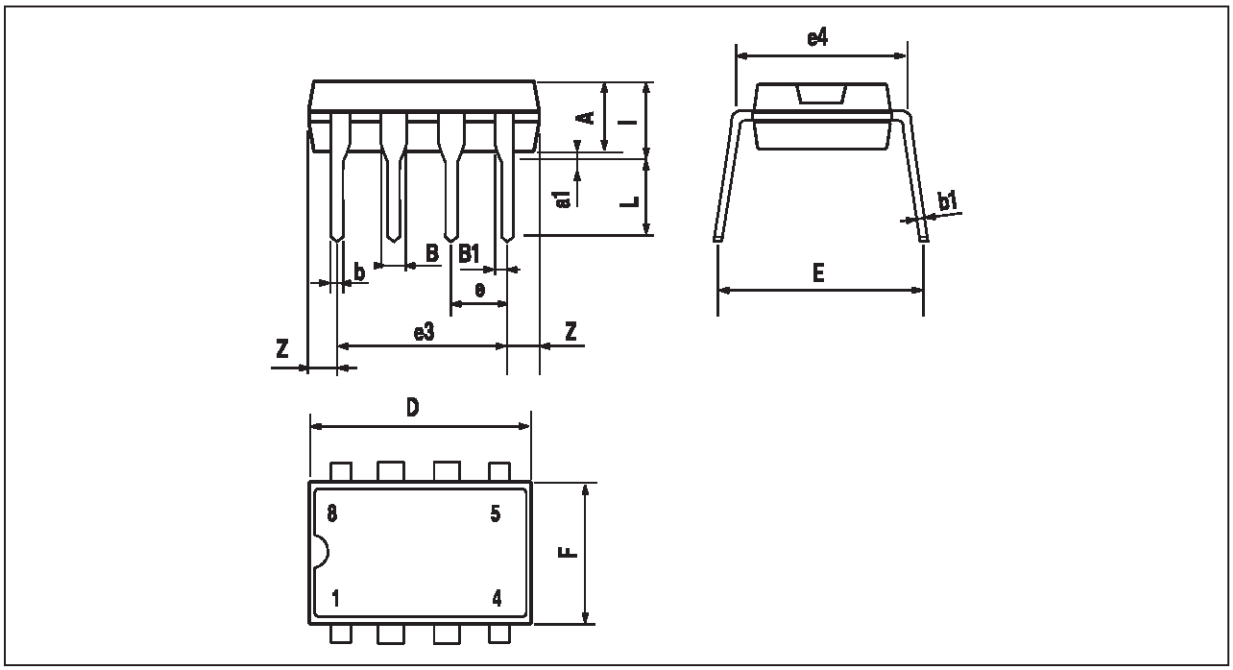
ELECTRICAL CHARACTERISTICS

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

Symbol	Parameter	Min.	Typ.	Max.	Unit
V_{io}	Input Offset Voltage $V_{ic} = 0V$, $V_o = 0V$		1	5	mV
DV_{io}	Input Offset Voltage Drift $V_{ic} = 0V$, $V_o = 0V$		5		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		+1.35	V
CMR	Common Mode Rejection Ratio $V_{ic} = \pm 1.35V$	60	85		dB
SVR	Supply Voltage Rejection Ratio $V_{CC} = \pm 2V$ to $\pm 3V$	60	70		dB
V_{oh}	High Level Output Voltage $R_L = 2k$ $V_{id} = 100mV$	2	2.4		V
V_{ol}	Low Level Output Voltage $R_L = 2k$ $V_{id} = -100mV$		-2.4	-2	V
A_{vd}	Large Signal Voltage Gain $R_L = 2k$	70	80		dB
GBP	Gain Bandwidth Product $f = 100kHz$, $R_L = 2k\Omega$, $C_L = 100pF$	8.5	12		MHz
SR	Slew Rate $A_V = 1$, $V_{in} = \pm 1V$	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 $f = 1kHz$, $A_V = -1$, $R_L = 10k\Omega$		0.003		%

PACKAGE MECHANICAL DATA

8 PINS - PLASTIC DIP



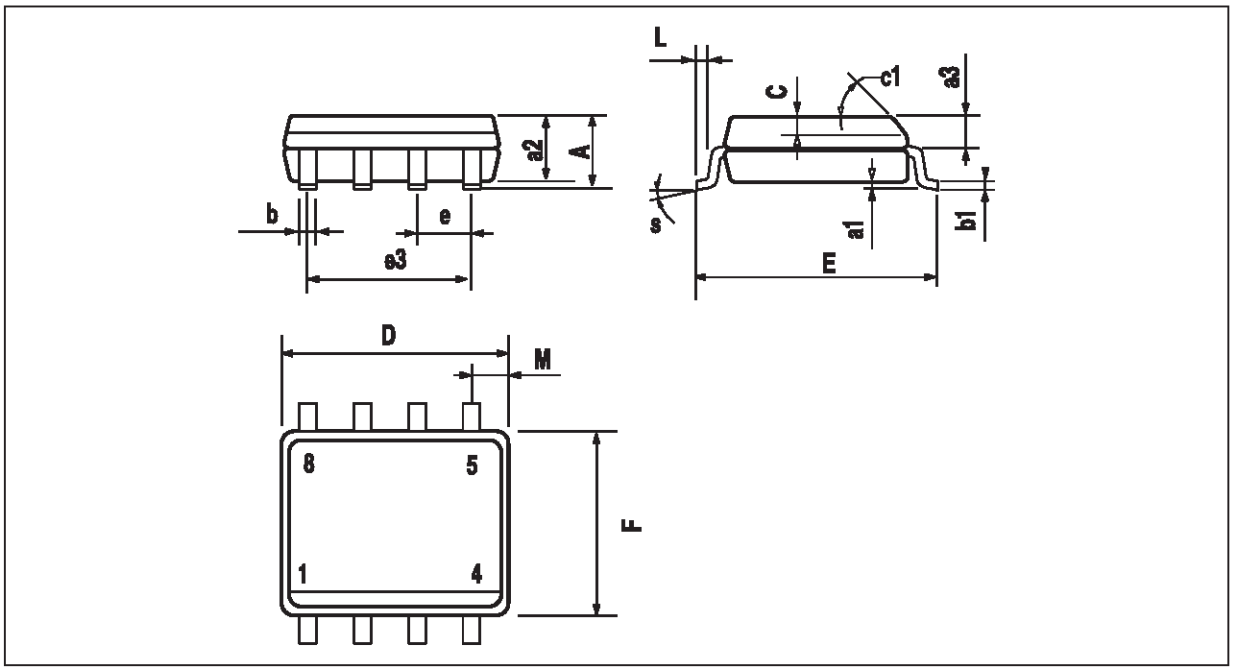
PM-DIP8.EPS

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			0260
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)



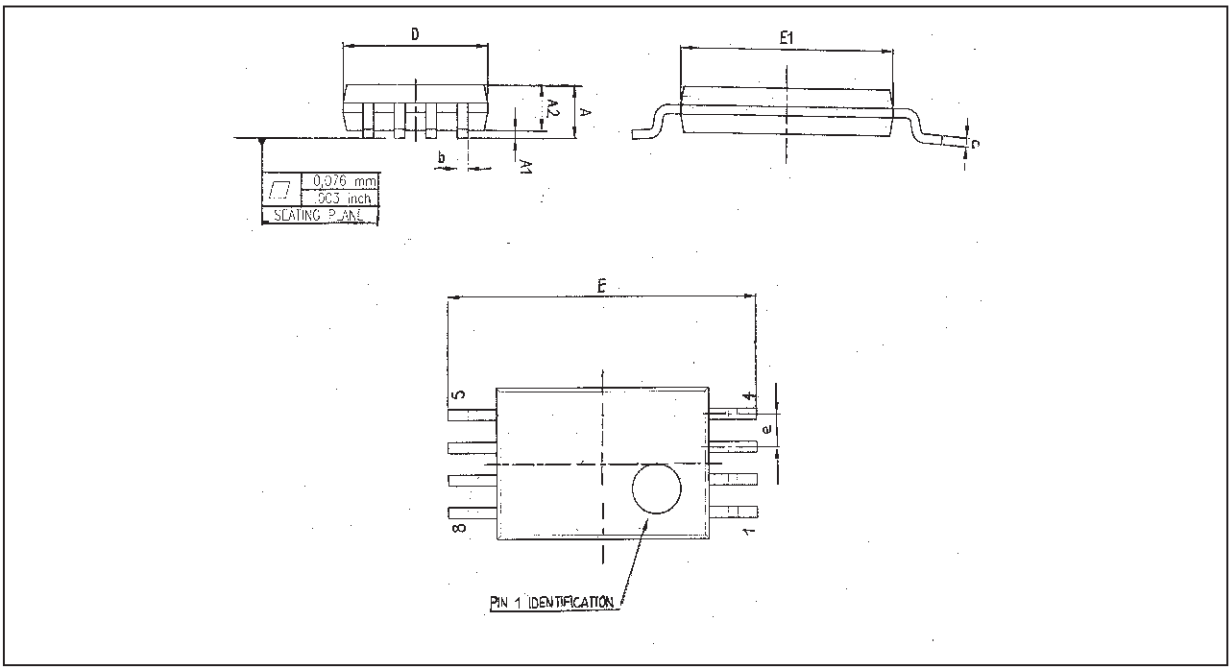
PM-SO8.EPS

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.)					

SO8.TBL

PACKAGE MECHANICAL DATA

8 PINS - THIN SHRINK SMALL OUTLINE PACKAGE



Dim.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.20			0.05
A1	0.05		0.15	0.01		0.006
A2	0.80	1.00	1.05	0.031	0.039	0.041
b	0.19		0.30	0.007		0.15
c	0.09		0.20	0.003		0.012
D	2.90	3.00	3.10	0.114	0.118	0.122
E		6.40			0.252	
E1	4.30	4.40	4.50	0.169	0.173	0.177
e		0.65			0.025	
k	0^o		8^o	0^o		8^o
l	0.50	0.60	0.75	0.09	0.0236	0.030

ORDER CODE :