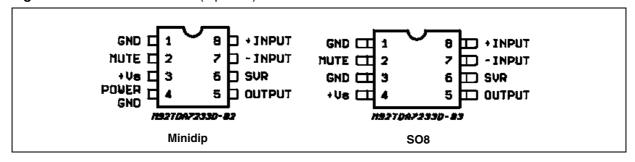
**Table 2. Absolute Maximum Ratings** 

Symbol	Parameter	Value	Unit
Vs	Supply Voltage	16	V
P <sub>tot</sub>	Total Power Dissipation at T <sub>amb</sub> = 50 °C	1	W
Io	Output Peak Current	1	Α
T <sub>stg</sub> , T <sub>j</sub>	Storage and Junction Temperature	-40 to 150	°C

Figure 3. PIN CONNECTIONS (top view)



**Table 3. Thermal Data** 

Symbol	Parameter	SO8	MInidip	Unit	
R <sub>th j-amb</sub>	Thermal Resistance Junction-ambient	Max.	200	100	°C/W

Table 4. Electrical Characteristcs ( $V_s$  = 6 V,  $T_{amb}$  = 25 °C, unless otherwise specified)

Parameter	Test Condition	Min.	Тур.	Max.	Unit
Supply Voltage		1.8		15	V
Quiescent Output Voltage	Vs = 3 V Vs = 9 V		2.7 1.2 4.2		V
Quiescent Drain Current	MUTE HIGH		3.6	9	mA
	MUTE LOW		0.4		mA
Input Bias Current			100		nA
Output Power  Distortion	$\label{eq:section} \begin{array}{l} \text{Vs} = 12 \text{V; } \text{R}_{L} = 8\Omega \\ \text{Vs} = 9 \text{V; } \text{R}_{L} = 4\Omega \\ \text{Vs} = 9 \text{V; } \text{R}_{L} = 8\Omega \\ \text{Vs} = 6 \text{V; } \text{R}_{L} = 8\Omega \\ \text{Vs} = 6 \text{V; } \text{R}_{L} = 4\Omega \\ \text{Vs} = 3 \text{V; } \text{R}_{L} = 4\Omega \\ \text{Vs} = 3 \text{V; } \text{R}_{L} = 8\Omega \\ \end{array}$		1.9 1.6 1 0.4 0.7 110 70		W W W W mW mW
	Vs = 9V				, -
Closed Loop Voltage Gain	f = 1KHz;		39		dB
Input Resistance	f = 1KHz;	100			ΚΩ
Total Input Noise	Rs = $10K\Omega$ ; B = Curve A Rs = $10K\Omega$ ; B = $22Hz$ to $22KHz$		2 3		μV μV
Supply Voltage Rejection	$f = 100Hz; R_g = 10K\Omega$		45		dB
MUTE Attenuation	Vo = 1V; f = 100Hz to 10KHz;		70		dB
MUTE Threshold			0.6		V
MUTE Current	Vs = 15V		0.4		mA
	Supply Voltage  Quiescent Output Voltage  Quiescent Drain Current  Input Bias Current  Output Power  Distortion  Closed Loop Voltage Gain Input Resistance  Total Input Noise  Supply Voltage Rejection  MUTE Attenuation  MUTE Threshold		$ \begin{array}{c c} \text{Supply Voltage} & 1.8 \\ \hline \text{Quiescent Output Voltage} & Vs = 3 \text{ V} \\ Vs = 9 \text{ V} \\ \hline \\ \hline \text{Quiescent Drain Current} & \underline{\text{MUTE HIGH}} \\ \hline \text{MUTE LOW} \\ \hline \\ \hline \text{Input Bias Current} \\ \hline \\ \hline \text{Output Power} & d = 10\%;  \text{f} = 1\text{kHz} \\ Vs = 12V;  \text{R}_L = 8\Omega \\ Vs = 9V;  \text{R}_L = 8\Omega \\ Vs = 9V;  \text{R}_L = 8\Omega \\ Vs = 6V;  \text{R}_L = 8\Omega \\ Vs = 6V;  \text{R}_L = 8\Omega \\ Vs = 3V;  \text{R}_L = 8\Omega \\ Vs = 3V;  \text{R}_L = 8\Omega \\ Vs = 9V \\ \hline \text{Closed Loop Voltage Gain} & \text{f} = 1\text{KHz}; \\ \hline \text{Input Resistance} & \text{f} = 1\text{KHz}; \\ \hline \text{Input Resistance} & \text{f} = 1\text{KHz}; \\ \hline \text{Total Input Noise} & \text{Rs} = 10\text{K}\Omega; \text{ B} = \text{Curve A} \\ \text{Rs} = 10\text{K}\Omega; \text{ B} = 22\text{Hz to } 22\text{KHz} \\ \hline \text{Supply Voltage Rejection} & \text{f} = 100\text{Hz}; \text{ R}_g = 10\text{K}\Omega \\ \hline \text{MUTE Attenuation} & \text{Vo} = 1\text{V}; \text{ f} = 100\text{Hz}; \\ \hline \text{MUTE Threshold} & \\ \hline \end{array}$		

Figure 4. Output Power versus Supply Voltage

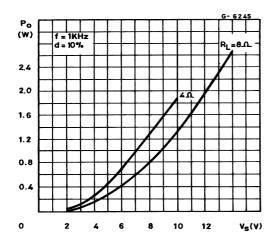


Figure 5. Supply Voltage Rejection versus Frequency

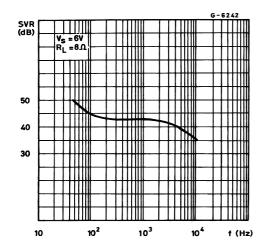


Figure 6. DC Output Voltage versus Supply Voltage

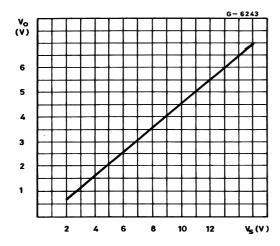


Figure 7. Quiescent Current versus Supply Voltage

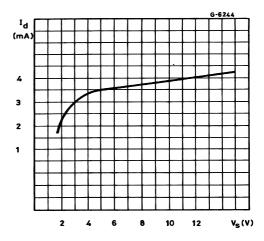
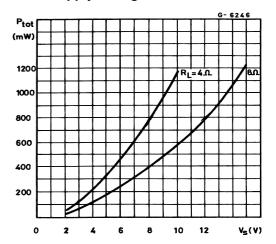


Figure 8. Total Power Dissipated versus Supply Voltage



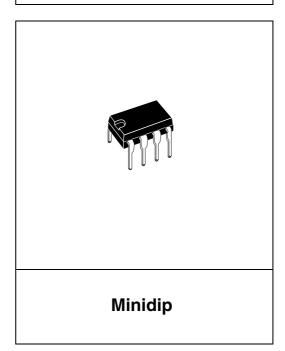
### 3 PACKAGE MECHANICAL DATA

In order to meet environmental requirements, ST offers these devices in different grades of ECOPACK<sup>®</sup> packages, depending on their level of environmental compliance. ECOPACK<sup>®</sup> specifications, grade definitions and product status are available at: <a href="https://www.st.com">www.st.com</a>. ECOPACK<sup>®</sup> is an ST trademark.

Figure 9. Minidip Mechanical Data & Package Dimensions

DIM.	mm			inch		
DIW.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
Α		3.32			0.131	
a1	0.51			0.020		
В	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
Е	7.95		9.75	0.313		0.384
е		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

# OUTLINE AND MECHANICAL DATA



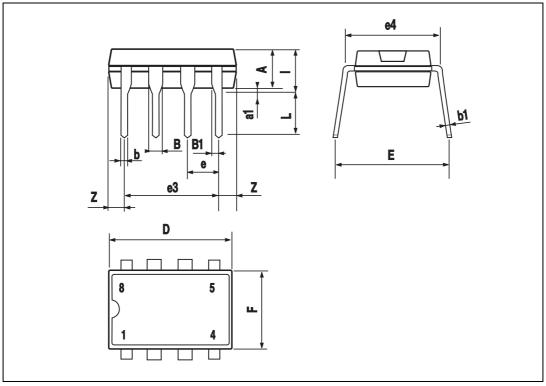


Figure 10. SO8 Mechanical Data & Package Dimensions

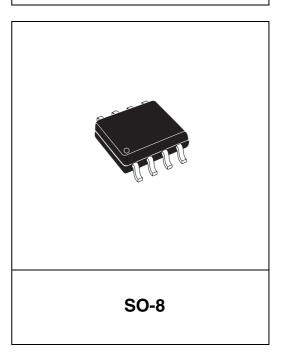
DIM.		mm			inch		
DIIVI.	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.	
Α			1.750			0.0689	
A1	0.100		0.250	0.0039		0.0098	
A2	1.250			0.0492			
b	0.280		0.480	0.0110		0.0189	
С	0.170		0.230	0.0067		0.0091	
D (1)	4.800	4.900	5.000	0.1890	0.1929	0.1969	
Е	5.800	6.000	6.200	0.2283	0.2362	0.2441	
E1 <sup>(2)</sup>	3.800	3.900	4.000	0.1496	0.1535	0.1575	
е		1.270			0.0500		
h	0.250		0.500	0.0098		0.0197	
L	0.400		1.270	0.0157		0.0500	
L1		1.040			0.0409		
k	0°		8°	0°		8°	
ccc			0.100			0.0039	

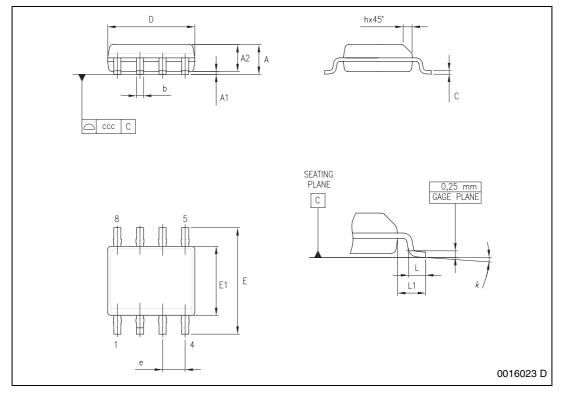
Notes: 1. Dimensions D does not include mold flash, protrusions or gate burrs.

Mold flash, potrusions or gate burrs shall not exceed 0.15mm in total (both side).

2. Dimension "E1" does not include interlead flash or protrusions. Interlead flash or protrusions shall not exceed 0.25mm per side.

### **OUTLINE AND MECHANICAL DATA**





## **4 REVISION HISTORY**

**Table 5. Revision History** 

Date	Revision	Description of Changes
September 2003	3	No recorded changes
03-May-2010	4	Updated title and added environmental compliance statement for package

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