



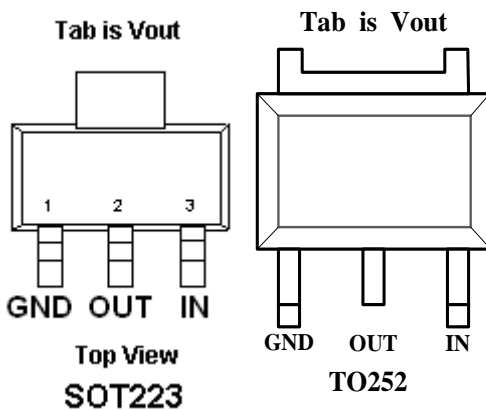
Description

SE1122 is a low dropout positive fixed-mode regulator with minimum of 1A output current capability. The product is specifically designed to provide well-regulated supply for low voltage IC applications such as high-speed bus termination and low current 1.2V logic supply. SE1122 is also well suited for other applications such as VGA cards. SE1122 is guaranteed to have a typical 1.3V dropout at full load current making it ideal to provide well-regulated outputs of 1.2 output voltage with 2.7V input voltage supply.

Features

- 1.3V typical dropout
- Fixed 1.2V± 2% output voltage
- Fast transient response
- Output current limiting
- Built-in thermal shutdown
- Good noise rejection
- Rugged 2KV ESD withstand capability.
- Available in SOT223 & TO252 Packages.
- Works best with inexpensive electrolytic Capcitors.
- RoHS Compliant

Pin Configuration



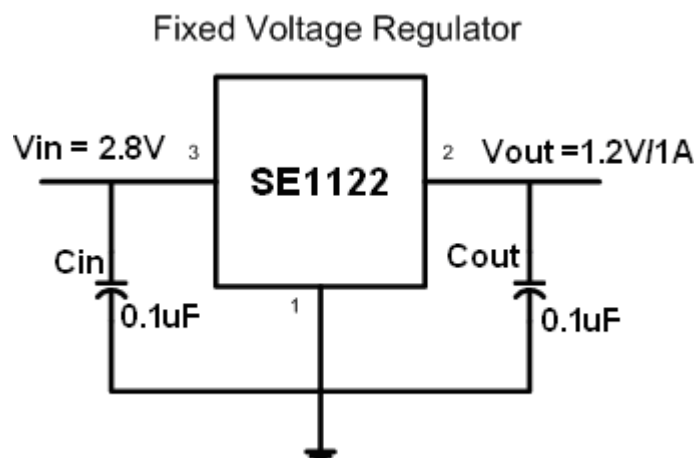
Application

- PC peripheral
- Communication

Ordering Information

Device	Package	V _{OUT}
SE1122-HF	SOT-223 (Halogen Free)	Fixed output voltages 1.2V
SE1122-LF	TO252 (Lead free)	

Typical Application





Absolute Maximum Rating

Symbol	Parameter	Maximum	Units
V _{IN}	Input Supply Voltage	12	V
θ _{JA}	Thermal Resistance Junction to Ambient (SOT-223)	140	°C/W
T _J	Operating Junction Temperature Range	0 to 125	°C
T _{STG}	Storage Temperature Range	-40 to 150	°C
T _{LEAD}	Lead Temperature (Soldering 10 Sec)	260	°C

Note 1: Thermal Resistance Junction to Ambient (TO252) is 105 °C/W

Electrical Characteristic

V_{IN} = 2.8V, I_{OUT} = 10mA, C_{IN} = 0.1µF, C_{OUT} = 0.1µF, T_A = 25°C, unless otherwise specified.

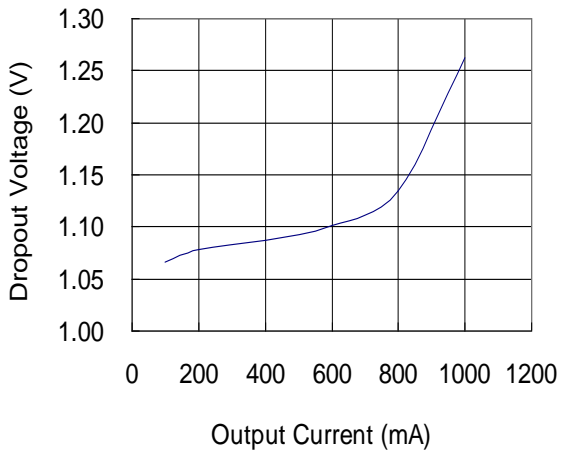
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V _O	Output Voltage ⁽¹⁾		1.176	1.2	1.224	V
V _{SR}	Line Regulation ⁽¹⁾	2.8V < V _{IN} < 12V	--	0.3	--	%/V
V _{LR}	Load Regulation ⁽¹⁾	10mA ≤ I _{OUT} ≤ 1A	--	0.0005	--	%/mA
I _q	Quiescent Current			3	5	mA
V _D	Dropout Voltage ⁽²⁾	I _{OUT} = 1A	--	1.3	--	V
I _{CL}	Current Limit		1.1	--	--	A
T _C	Temperature Coefficient		--	0.02	--	%/°C
OTP	Thermal Protection		--	175	--	°C
V _N	RMS Output Noise	T _A = 25°C, 10Hz ≤ f ≤ 10kHz	--	0.003	--	%V _O
R _A	Ripple Rejection Ratio	f = 120Hz, C _{OUT} = 22µF (Tantalum), (V _{IN} - V _{OUT}) = 3V, I _{OUT} = 10mA	--	57	--	dB

Notes:

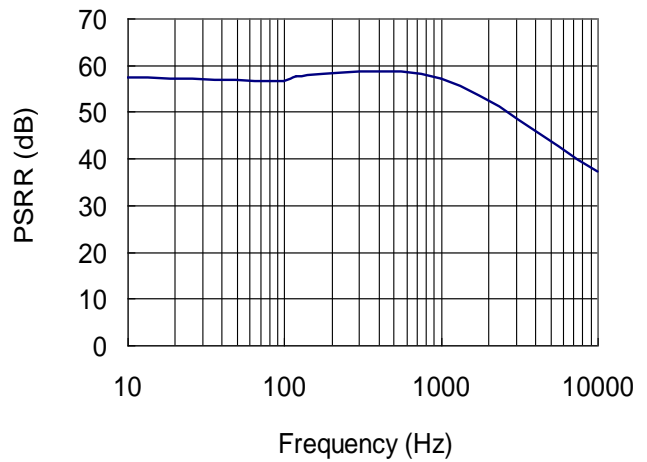
1. Low duty cycle pulse testing with which T_J remains unchanged.
3. The dropout voltage is the input/output differential at which the circuit ceases to regulate against further reduction in input voltage. It is measured when the output voltage has dropped 2% from the nominal value obtained at V_{IN} = V_{OUT} + V_{dropout}.



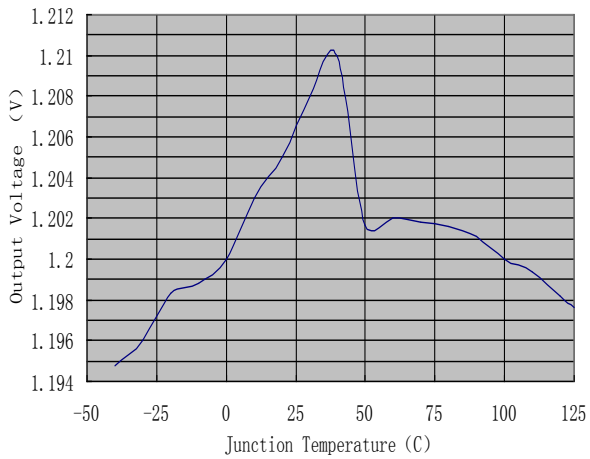
Dropout Voltage VS Output Current



PSRR

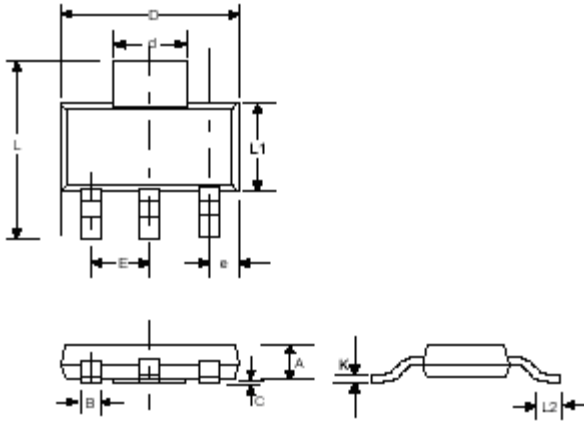


Output Voltage Vs Junction Temperature



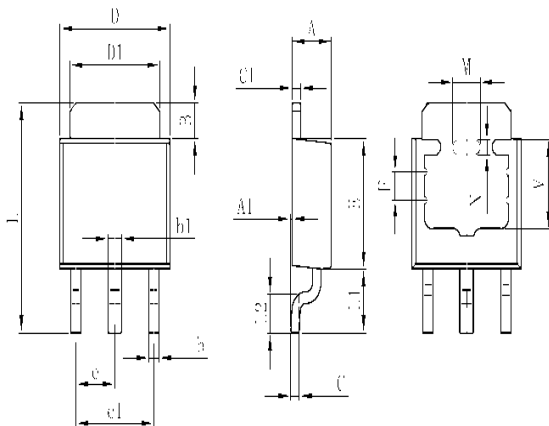


Outline Drawing for SOT-223



DIM ^N	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	—	0.071	—	1.80
B	0.025	0.033	0.640	0.840
C	0.012	—	0.31	—
D	0.248	0.264	6.30	6.71
d	0.115	0.124	2.95	3.15
E	—	0.090	—	2.29
e	0.033	0.041	0.840	1.04
L	0.264	0.287	6.71	7.29
L1	0.130	0.148	3.30	3.71
L2	0.012	—	0.310	—
K	0.010	0.014	0.250	0.360

Outline Drawing for TO252



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP.		0.091 TYP.	
e1	4.500	4.700	0.177	0.185
F	1.200 REF.		0.047 REF.	
M	1.600 REF.		0.063 REF.	
N	0.450 REF.		0.018 REF.	
L	9.500	9.900	0.374	0.390
L1	2.550	2.900	0.100	0.114
L2	1.400	1.780	0.055	0.070
V	3.800 REF.		0.150 REF.	



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