



MC1403

2.5V PRECISION SERIAL VOLTAGE REFERENCE

- OUTPUT VOLTAGE : $2.5V \pm 1\%$
- INPUT VOLTAGE RANGE : 4.5V to 40V
- QUIESCENT CURRENT : 1.2mA typ.
- OUTPUT CURRENT : 10mA

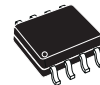
DESCRIPTION

The MC1403 is a serial 2.5V bandgap voltage reference. The major advantages are the 1% precision, the wide input voltage range (4.5V to 40V) and the low quiescent current (1.5mA max.)

ORDER CODE

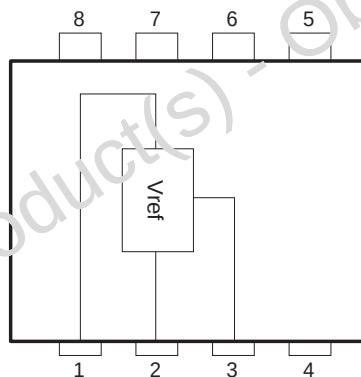
Part Number	Temperature Range	Package
		D
MC1403	0°C, +70°C	•

D = Small Outline Package (SO) - also available in Tape & Reel (DT)



D
SO8
(Plastic Micropackage)

PIN CONNECTIONS (top view)



- 1 - V_{in}
- 2 - V_{out}
- 3 - GND
- 4 - N.C.
- 5 - N.C.
- 6 - N.C.
- 7 - N.C.
- 8 - N.C.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{IN}	Input Voltage	40	V
T_{stg}	Storage Temperature Range	-65 to +150	°C

OPERATING CONDITIONS

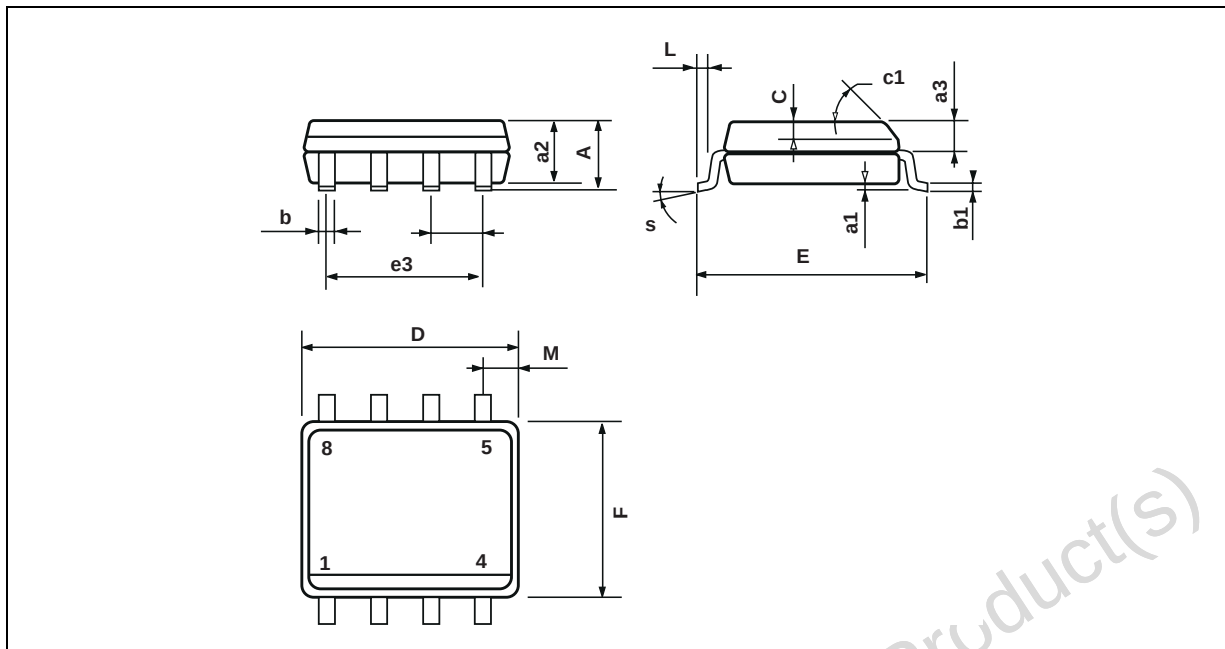
Symbol	Parameter	Value	Unit
V_{IN}	Input Voltage ($I_{OUT} = 0mA$)	4.5 to 40	V
T_{oper}	Operating Free Air Temperature Range	0 to +70	°C

ELECTRICAL CHARACTERISTICS

$T_{amb} = 25^{\circ}C$, $V_{IN} = 15V$ (unless otherwise specified)

Symbol	Parameter	Min.	Typ.	Max.	Unit
V_{OUT}	Output Voltage $I_{OUT} = 0mA$	2.475	2.5	2.525	V
$\frac{\Delta V_{out}}{\Delta T}$	Temperature Coefficient of Output Voltage $I_{OUT} = 0mA$		10	40	ppm/°C
ΔV_{OUT}	Output Voltage change Over the Full Temperature Range $I_{OUT} = 0mA$		2	7	mV
Reg_{line}	Line regulation $I_{OUT} = 0mA$, $4.5V \leq V_i \leq 15V$ $I_{OUT} = 0mA$, $15V \leq V_i \leq 40V$			3 4.5	mV
Reg_{load}	Load Regulation $0 \leq I_{OUT} \leq 10mA$			10	mV
I_Q	Quiescent Current $I_{OUT} = 0mA$		1.2	1.5	mA

PACKAGE MECHANICAL DATA
8 PINS - PLASTIC MICROPACKAGE (SO)



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.)					

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

© The ST logo is a registered trademark of STMicroelectronics

© 2002 STMicroelectronics - Printed in Italy - All Rights Reserved
 STMicroelectronics GROUP OF COMPANIES

Australia - Brazil - Canada - China - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia
 Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States

© <http://www.st.com>