



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

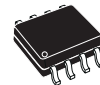
DESCRIPTION

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

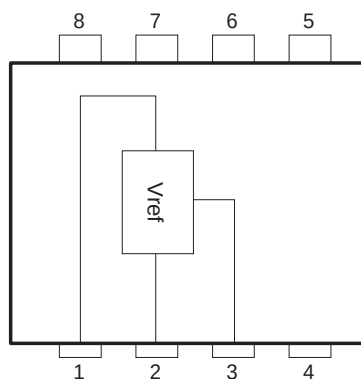
Part Number	Temperature Range	Package
		D
MC1403	0°C, +70°C	•

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

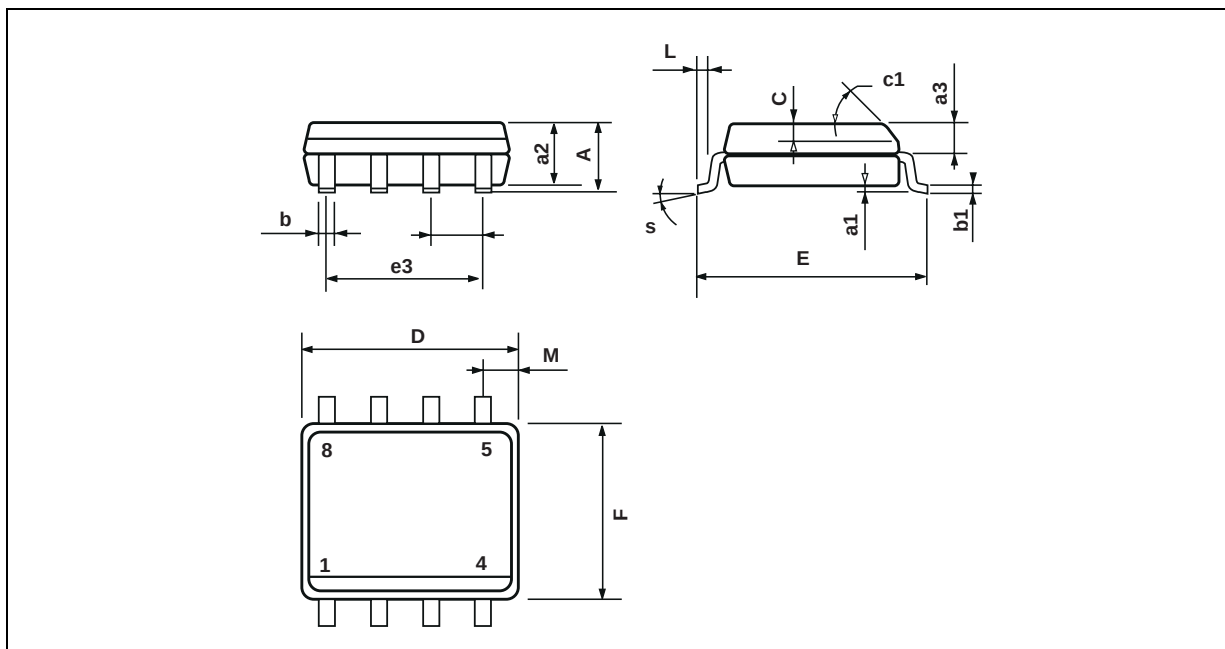
Symbol	Parameter	Value	Unit
V_{IN}	Input Voltage ($I_{OUT} = 0mA$)	4.5 to 40	V
T_{oper}	Operating Free Air Temperature Range	0 to +70	°C

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.)					

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