

**SMA4203**

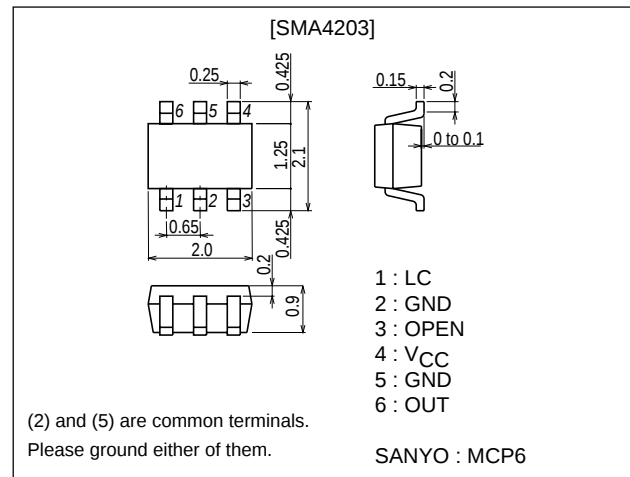
Oscillator IC for Laser Diode Noise Suppression Applications

Preliminary

Package Dimensions

unit : mm

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Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply Voltage	V _{CC}		6.0	V
Supply Current	I _{CC}		60	mA
Allowable Power Dissipation	P _D		280	mW
Operating Temperature	T _{opr}		-20 to +85	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Supply Current	I _{CC}	V _{CC} =5V, R _L =50Ω, fosc=400MHz	37	42	47	mA
Oscillation Power	Posc	V _{CC} =5V, R _L =50Ω, fosc=400MHz	4.5	7	8.5	dBm

NOTE : * Oscillation frequency mainly depends on the external LC.
(The LC is attached additionally to the LC terminal in series.)
* Recommended oscillation frequency.
350MHz to 450MHz

Marking : S2W

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[Reference data]

Power Supply Voltage vs Oscillation Power

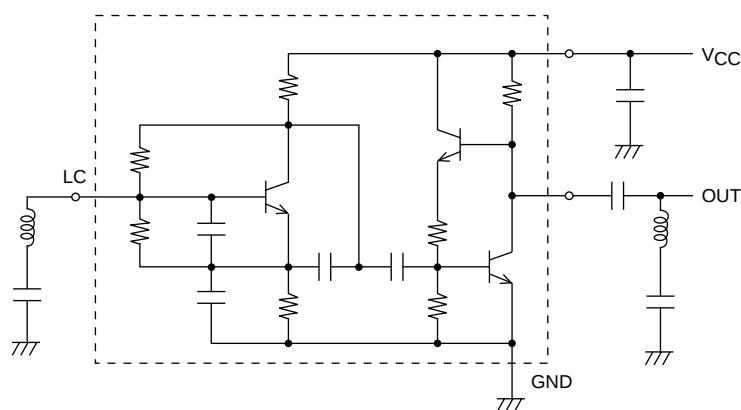
L=47nH, C=10pF

VCC V	ICC mA	Oscillation Power dBm
2.6	13.0	-3.0
2.8	16.0	-0.4
3.0	18.8	1.4
3.2	21.5	2.8
3.4	24.0	3.9
3.6	26.5	4.5
3.8	28.9	5.0
4.0	31.2	5.4
4.2	33.4	5.8
4.4	35.6	6.0
4.6	37.7	6.2
4.8	39.7	6.4
5.0	41.8	6.6

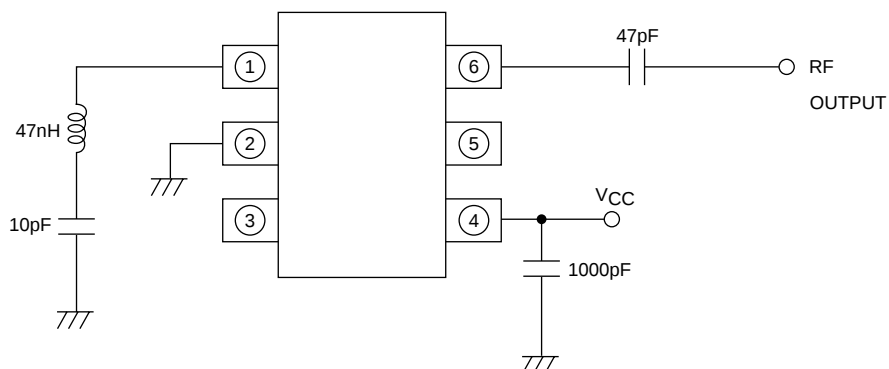
Oscillation Frequency vs L, C

L nH	C pF	Power Supply Voltage VCC V	Supply Current ICC mA	Oscillation Power Pout dBm	Oscillation Frequency fosc MHz
68	68	3.0	19.3	2.3	284
68	68	4.0	31.3	6.0	289
68	68	5.0	41.5	7.0	295
47	7	3.0	18.8	1.4	406
47	7	4.0	31.2	5.4	406
47	7	5.0	41.8	6.6	405
68	7	3.0	19.0	2.1	336
68	7	4.0	31.5	5.9	337
68	7	5.0	42.0	6.8	340
82	7	3.0	18.9	1.9	310
82	7	4.0	31.4	5.9	312
82	7	5.0	41.8	6.8	316
100	7	3.0	18.6	1.5	290
100	7	4.0	31.4	5.8	292
100	7	5.0	41.7	6.8	297

Equivalent Circuit



Test Circuit



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