1. Device Name TCXO
2. Model Name DSA211SDN
3. Nominal Frequency 26.000 MHz
4. Mass 0.015g max.

5. Absolute Maximum Ratings

	Item	Symbol	Rating	unit
1	Supply Voltage	V_{CC}	-0.3~+4.6	V
2	Storage Temperature Range	$T_{_STG}$	-40~+85	°C

6. Recommended Operating Conditions

	Item	Symbol	min.	typ.	max.	unit
1	Supply Voltage	V_{CC}	+2.66	+2.8	+2.94	V
2	Load Impedance (resistance part)	L_{OAD}_R	9	10	11	kΩ
	(parallel capacitance)	L_{OAD}_C	9	10	11	pF
3	Control Voltage Range	V_{CONT}	+0.4	+1.4	+2.4	V
4	Operating Temperature Range	$T_{_OPR}$	-40	-	+85	°C

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7. Electrical Characteristics

(T_A=-40~+85°C, L_{OAD}_R//C=10kΩ//10pF, V_{CC}=+2.8V, V_{CONT}=+1.4V, unless otherwise noted)

	Item	Conditions	Limits			unit	Notes
			min.	typ	max.		
1	Current Consumption		-	-	+1.5	mA	
2	Output Level		0.8	-	-	V_{P-P}	1
3	Symmetry	GND level (DC cut)	40/60	-	60/40	%	
4	Harmonics		-	-	-8	dBc	
5	Frequency Stability 1.Tolerance	After 2 times reflow Ref. to nominal frequency	-	-	±2.0	ppm	2,3
	2.vs Temperature	T_A=-30~+85°C V_{CONT}=+1.4V Ref. to frequency (T_A=+25°C)	-	-	±0.5	ppm	
		T_A=-40~-30°C V_{CONT}=+1.4V Ref. to frequency (T_A=+25°C)	-	-	±3.0	ppm	
	3.vs Slope	T_A=-20~+65°C	-	-	±0.05	ppm/°C	
		T_A=-30~+85°C	-	-	±0.1	ppm/°C	
		T_A=-40~-30°C	-	-	±0.35	ppm/°C	
	4.vs Hysteresis		-	-	±0.6	ppm	
	5.vs Supply Voltage	V_{CC}=+2.8V±0.14V	-	-	±0.1	ppm	
	6.vs Load Variation	L_{OAD}_R//C=(10kΩ//10pF)±10%	-	-	±0.1	ppm	
	7.vs Aging	T_A=Room ambient	-	-	±1.0	ppm/year	
		T_A=Room ambient	-	-	±1.5	ppm/2years	
		T_A=Room ambient	-	-	±2.5	ppm/5years	
		T_A=Room ambient	-	-	±5.0	ppm/10years	
6	Start Up Time	@90% of final Vout level	-	-	2.0	ms	
		Within ±0.5ppm of final frequency	-	-	2.0	ms	
7	G Sensitivity	within 30 to 1500Hz	-	-	2.0	ppb/G	
8	Frequency Control 1.Control Range	V_{CONT}=+1.4V±1.0V	±9	-	±15	ppm	4
	2.Input Resistance		100	-	-	kΩ	
9	SSB Phase Noise	Relative to f0 level offset 1Hz	-	-	-50	dBc/Hz	
		Relative to f0 level offset 10Hz	-	-	-80	dBc/Hz	
		Relative to f0 level offset 100Hz	-	-	-105	dBc/Hz	
		Relative to f0 level offset 1kHz	-	-	-130	dBc/Hz	
		Relative to f0 level offset 10kHz	-	-	-145	dBc/Hz	
		Relative to f0 level offset 100kHz	-	-	-150	dBc/Hz	
10	Root Allan Variance	Tau=1sec	-	-	0.3	ppb	

Notes

1. Clipped sine wave (DC-coupled)
2. T_A=+25°C
3. Please leave after reflow in 2h or more at room ambient.
4. Positive slope (Frequency becomes high in proportion to frequency control voltage.)

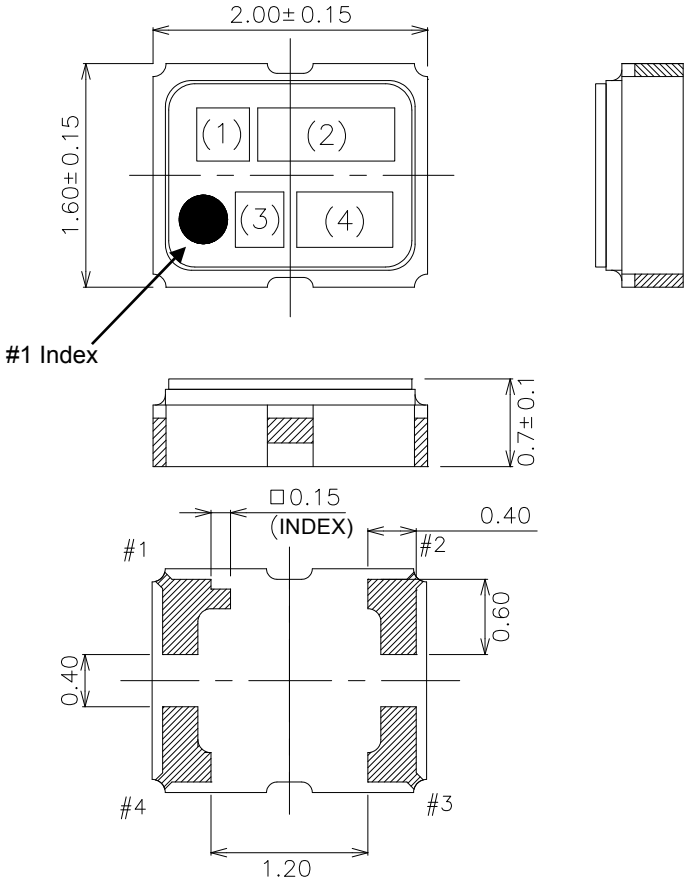
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8. Outline, Pin Connections

Outline



Pin Connections

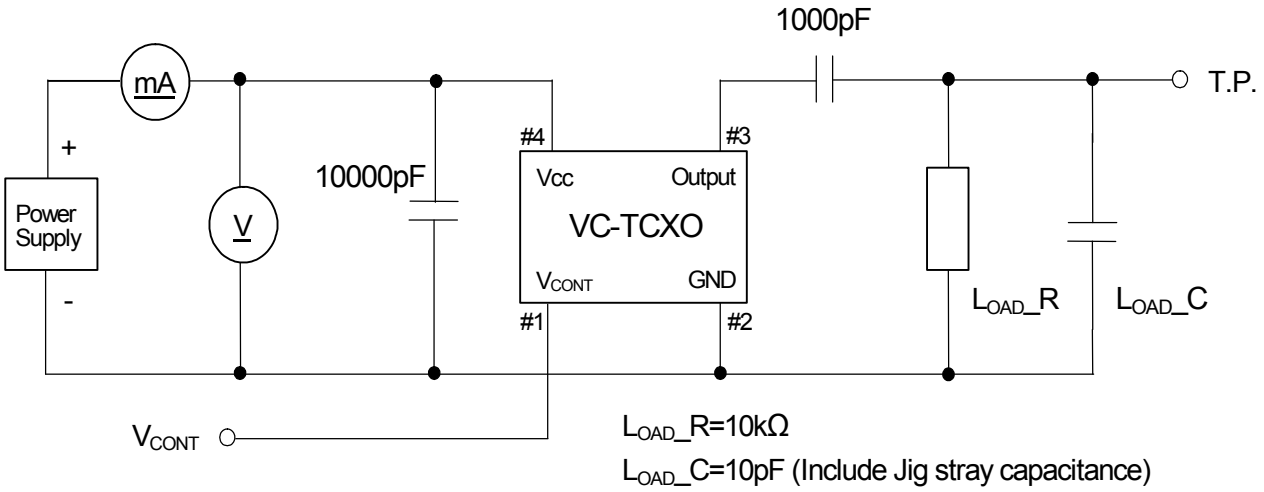
Pin No.	Connection
#1	Vcont
#2	GND
#3	Output
#4	V_{CC}

Marking

(1) Model code	AN
(2) Frequency	26.0 (MHz, 3digits)
(3) Logo	D
(4) Date code	Year (1digit) +Week (2digits)
	e.g.2015/1/1 → 501

unit: mm
Dimensional Tolerance: ±0.1
(Unless otherwise noted)

9. Measurement Circuit



L_{OAD}_R=10kΩ
L_{OAD}_C=10pF (Include Jig stray capacitance)

TITLE	Remark		
DSA211SDN TYPE SPECIFICATION	T15-0723		
Date	Spec. No.	Rev.	Page
2015/12/16	1XXC26000MAA	-	3/3