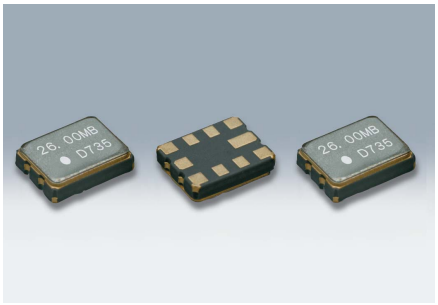
Miniature SMD VC-TCXO Module

DSA322MB for Mobile communications



Actual size

■Features

- 3225 size, 0.9mm high.
  Miniature and lightweight SMD VC-TCXO module (0.008cc, 0.03g)
- 3 output are available: Output 1 is a Clipped Sine wave output with ENABLE/ DISABLE function. Output 2 is a CMOS level output. Output 3 is CMOS level or Clipped Sine wave selectable. CMOS level output is related by independent supply (Vdd2, Vdd3)
- Temperature sensor output
- Single packaged structure
- Prevention of moisture packing is unnecessary
  Moisture Sensitivity Level: LEVEL 1 (IPC/JEDEC J-STD-033)

Pb-Free

RoHS Compliant

■Applications

- Mobile phones (W-CDMA, CDMA2000, TD-SCDMA, GSM, PCN, PCS)

■ Standard Specification

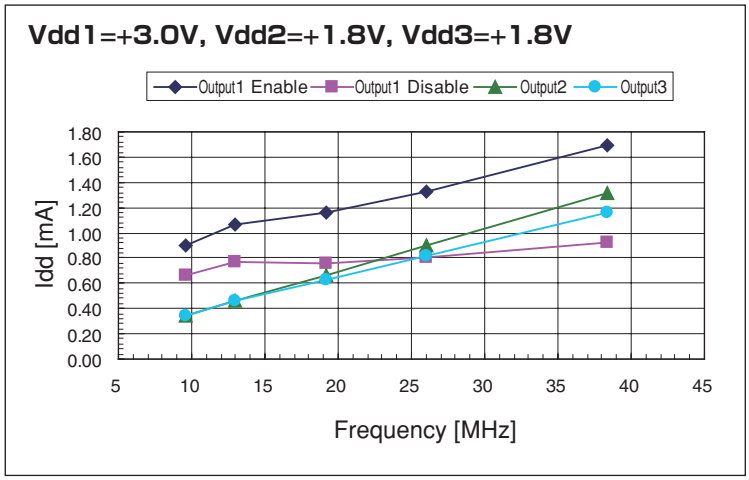
Item \ Type	DSA322MB (VC-TCXO Module)	
Output Frequency Range	9.6 to 40MHz	
Standard Frequency	13/ 19.2/ 26/ 38.4MHz	
Supply Voltage Range (Vdd1)	+2.3 to +3.5V	
Supply Voltage (Vdd1)	+2.6V/ +2.8V/ +3.0V/ +3.3V	
Supply Voltage at the buffer (Vdd2,Vdd3)	+1.4V/ +1.8V/ +2.5V/ +2.8V/ +3.0V/ +3.3V	
Current Consumption Idd1 (Output 1 : 'ENABLE') Idd1 (Output 1 : 'DISABLE') Idd2 Idd3	Output1:Clipped Sinewave/ Output2, Output3:CMOS/ Vdd1=+3.0V, Vdd2=+1.8V, Vdd3=+1.8V 1.4mA max. (f≦15MHz) /1.6mA max. (15<f≦26MHz) /2.0mA max. (f>26MHz) 1.1mA max. (f≦15MHz) /1.2mA max. (15<f≦26MHz) /1.3mA max. (f>26MHz) 0.8mA max. (f≦15MHz) /1.2mA max. (15<f≦26MHz) /1.7mA max. (f>26MHz) 0.8mA max. (f≦15MHz) /1.2mA max. (15<f≦26MHz) /1.7mA max. (f>26MHz)	
Output Level	@Std	@Option
Output 1	Clipped Sinewave/ DC-coupled 0.8Vp-p min. ENABLE/DISABLE CONTROL FUNCTION	Clipped Sinewave/ DC-coupled 0.8Vp-p min. ENABLE/DISABLE CONTROL FUNCTION
Output 2	CMOS '0' level 0.2×(Vdd2)V max. '1' level 0.8×(Vdd2)V min.	CMOS '0' level 0.2×(Vdd2)V max. '1' level 0.8×(Vdd2)V min.
Output 3	CMOS '0' level 0.2×(Vdd3)V max. '1' level 0.8×(Vdd3)V min.	Clipped Sinewave/ DC-coupled 0.8Vp-p min. ENABLE/DISABLE CONTROL FUNCTION
Output Load	10kΩ//10pF (Clipped Sinewave) ,15pF (CMOS)	
Frequency Stability		
Tolerance	±1.5×10^{-6}max. (After 2 reflows)	
vs. Temperature	±2.0×10^{-6}max./ −30 to +85deg.C	
vs. Supply Voltage	±0.2×10^{-6}max.(Vdd1±5%)	
vs. Load Variation	±0.2×10^{-6}max.(10kΩ//10pF±10%)	
vs. Aging	±1.0×10^{-6}max./year	
Start up Time	2.0msec max.	
Frequency Control Control Sensitivity	±9×10^{-6} to ±15×10^{-6}/ Vcont=+1.5±1V	
Response Slope	Positive	
Phase Noise	[f≦15MHz] −115dBc/Hz (Offset 100Hz) −135dBc/Hz (Offset 1kHz) −140dBc/Hz (Offset 10kHz) −140dBc/Hz (Offset 100kHz)	[15<f≦26MHz] −110dBc/Hz (Offset 100Hz) −130dBc/Hz (Offset 1kHz) −140dBc/Hz (Offset 10kHz) −140dBc/Hz (Offset 100kHz)
	[f>26MHz] −100dBc/Hz (Offset 100Hz) −120dBc/Hz (Offset 1kHz) −135dBc/Hz (Offset 10kHz) −140dBc/Hz (Offset 100kHz)	
Temp. Sensor Output	+1.474 V typ. (Ta=+30deg.C) −8.20mV/deg.C typ.	
Packing Unit	2000pcs./reel (φ180)	

Consult our sales representative for other specifications.

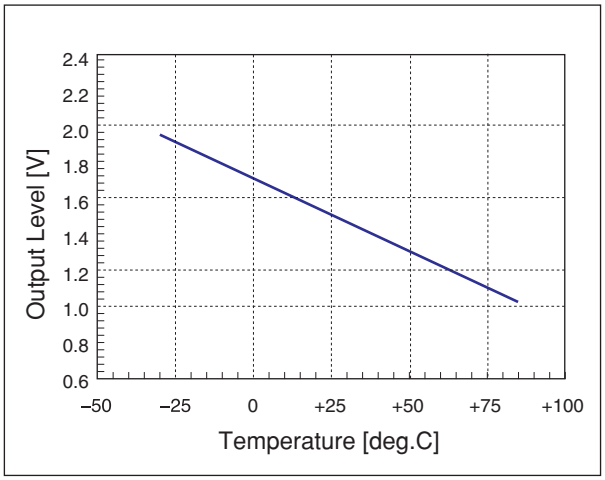
Miniature SMD VC-TCXO Module

DSA322MB for Mobile communications

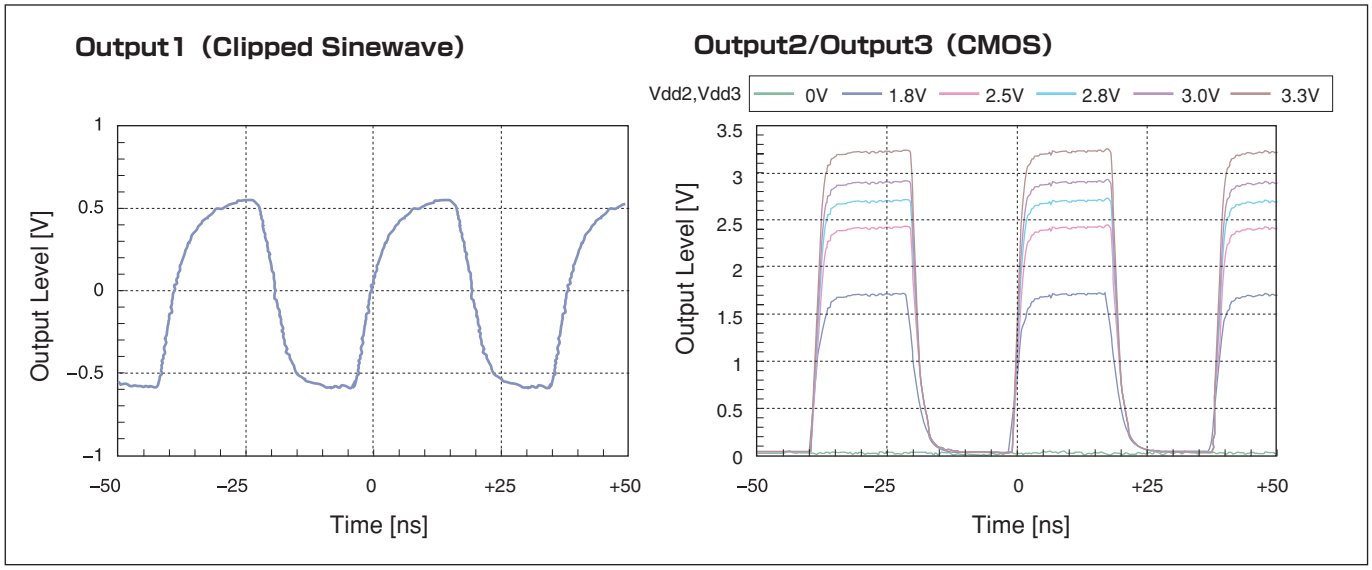
■DSA322MB Current Consumption



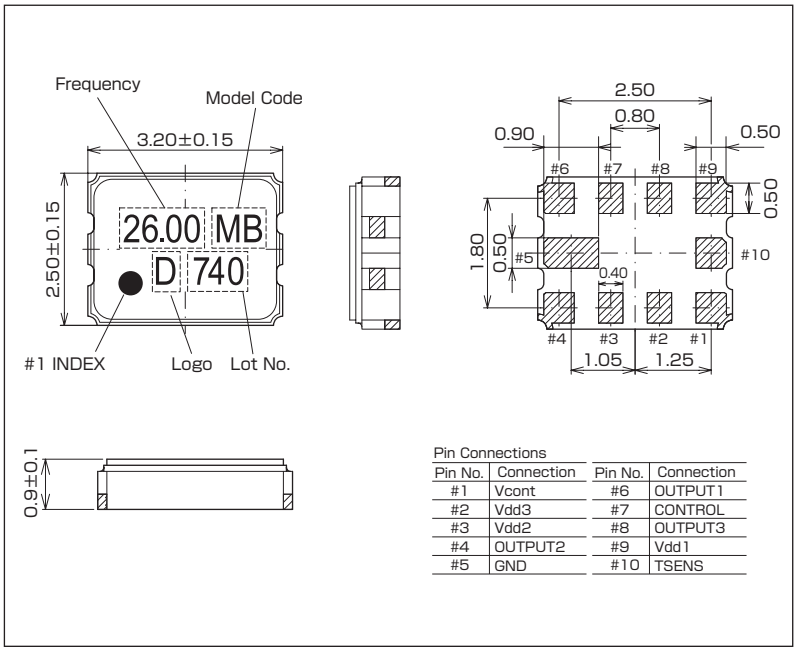
■DSA322MB Temp. Sensor Output



■DSA322MB 26MHz Output Waveform



■ Dimensions[mm]



Pin Connections

Pin No.	Connection	Pin No.	Connection
#1	Vcont	#6	OUTPUT1
#2	Vdd3	#7	CONTROL
#3	Vdd2	#8	OUTPUT3
#4	OUTPUT2	#9	Vdd1
#5	GND	#10	TSENS

■ Recommended Land Pattern [mm]

〈Top View〉