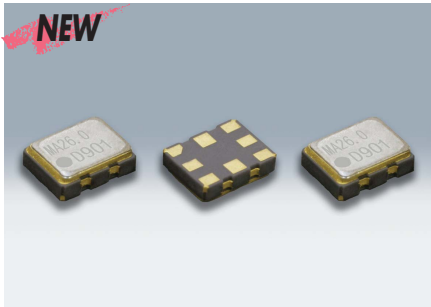


Ultra miniature SMD VC-TCXO Module

DSA222MAA/DSB222MAA/DSA222MAB/DSB222MAB for Mobile communications



Actual size

■ Features

- 2520size, 0.8mm high ultra miniature and lightweight SMD VC-TCXO Module (0.0045cc·0.02g)
- 2 output are available :
Output1 is a Clipped Sine wave output,
Output2 is Clipped Sine wave with ENABLE/DISABLE or CMOS level.
CMOS level output is related by independent supply.
- Temperature sensor output
- Prevention of moisture packing is unnecessary.
Moisture Sensitivity Level : LEVEL 1 (IPC/JEDEC J-STD-033)



■ Applications

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

■ Standard Specification

Item	Type	DSA222MAA	DSB222MAA	DSA222MAB	DSB222MAB
Output Frequency Range		13~52MHz		13~40MHz	
Standard Frequency		13/ 19.2/ 26/ 38.4MHz			
Supply Voltage Range (Vdd)		+2.3~+3.63V			
Supply Voltage (Vdd)		+2.6V/ +2.8V/ +3.0V/ +3.3V			
Supply Voltage for buffer (Vdd2)		—		+1.6~+3.63VDC	
Current Consumption					
Idd1 (Output1 :'ENABLE')		2.0mA max. (f≤26MHz) /3.0mA max. (26<f≤52MHz)		1.5mA max. (f≤26MHz) /2.0mA max. (26<f≤40MHz)	
Idd1 (Output1 :'DISABLE')		1.5mA max. (f≤26MHz) /2.5mA max. (26<f≤52MHz)		1.5mA max. (f≤26MHz) /2.0mA max. (26<f≤40MHz)	
Idd2		—		2.0mA max. (f≤26MHz) /3.5mA max. (26<f≤40MHz)	
Output Level					
Output1		Clipped Sinewave/ DC-coupled 0.8Vp-p min.		Clipped Sinewave/ DC-coupled 0.8Vp-p min.	
Output2		Clipped Sinewave/ DC-coupled 0.8Vp-p min. ENABLE/DISABLE CONTROL FUNCTION		CMOS '0'level 0.2×(Vdd2) V max. '1'level 0.8×(Vdd2) V min.	
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~+85°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		2.0ms max.			
Frequency Control					
Control Sensitivity		±9~±15×10 ⁻⁶ (Vcont=+1.5±1V)	—	±9~±15×10 ⁻⁶ (Vcont=+1.5±1V)	—
Response Slope		Positive	—	Positive	—
Phase Noise		[13MHz<f≤26MHz] -110dBc/Hz (Offset 100Hz) -130dBc/Hz (Offset 1kHz) -140dBc/Hz (Offset 10kHz) -145dBc/Hz (Offset 100kHz)		[26MHz<f≤52MHz] -105dBc/Hz (Offset 100Hz) -125dBc/Hz (Offset 1kHz) -135dBc/Hz (Offset 10kHz) -145dBc/Hz (Offset 100kHz)	
Temp. Sensor Output		+1.474 V Typ. (Ta=+30°C)		-8.20mV/°C Typ.	
Packing Unit		2000pcs./reel (φ180)			

Consult our sales representative for other specifications.