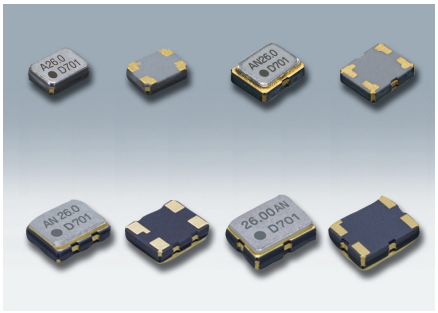
High-precision SMD VC-TCXO/TCXO

DSA1612SDN/DSA211SDN/DSA221SDN/DSA321SDN
DSB1612SDN, DSB1612SDNB/DSB211SDN, DSB211SDNB/DSB221SDN, DSB221SDNB/DSB321SDN, DSB321SDNB



Actual size DSA1612SDN DSA211SDN
DSA221SDN DSA321SDN

Features

- Low voltage operation
- Low phase noise
- Single package structure

Applications

- Mobile phones
- GPS/GNSS and Industrial radio communications

Pb-Free

RoHS Compliant

[Type]

VC-TCXO	TCXO	TCXO (Stand-by Function)	Size
DSA1612SDN	DSB1612SDN	DSB1612SDNB	1612 size
DSA211SDN	DSB211SDN	DSB211SDNB	2016 size
DSA221SDN	DSB221SDN	DSB221SDNB	2520 size
DSA321SDN	DSB321SDN	DSB321SDNB	3225 size

Standard Specification

Item \ Type	VC-TCXO				TCXO							
	DSA1612SDN	DSA211SDN	DSA221SDN	DSA321SDN	DSB1612SDN	DSB211SDN	DSB221SDN	DSB321SDN	DSB1612SDNB (Stand-by Function)	DSB211SDNB (Stand-by Function)	DSB221SDNB (Stand-by Function)	DSB321SDNB (Stand-by Function)
Frequency Range	16 to 60MHz	12.288 to 52MHz	9.6 to 52MHz		16 to 60MHz	12.288 to 52MHz	9.6 to 52MHz		16 to 60MHz	12.288 to 52MHz	9.6 to 52MHz	
Standard Frequency	19.2MHz/26MHz/38.4MHz/40MHz/52MHz				16.3676MHz/16.367667MHz/16.368MHz/16.369MHz/16.8MHz/26MHz/33.6MHz							
Supply Voltage Range	+1.68 to +3.5V											
Supply Voltage (Vcc)	+1.8V/+2.6V/+2.8V/+3.0V/+3.3V											
Current Consumption	+1.5mA max. (f≦26MHz) /+2.0mA max. (26<f≦52MHz) /+2.5mA max. (f≦60MHz)											
Stand-by Current (#1 pin "L" Level)	–								+3μA max.			
Output Level	0.8Vp-p min. (f≦52MHz) (Clipped Sinewave/DC-coupled)											
Output Load	10kΩ//10pF											
Frequency Stability Tolerance	±1.5×10^{-6} max. (After 2 reflows)											
vs. Temperature	±1.0×10^{-6},±2.5×10^{-6} max./-30 to +85℃ ±1.0×10^{-6},±2.5×10^{-6} max./-40 to +85℃(Option)				±0.5×10^{-6},±2.5×10^{-6} max./-30 to +85℃ ±0.5×10^{-6},±2.5×10^{-6} max./-40 to +85℃(Option)							
vs. Supply Voltage	±0.2×10^{-6} max. (Vcc ±5%)											
vs. Load Variation	±0.2×10^{-6} max. (10kΩ//10pF±10%)											
vs. Aging	±1.0×10^{-6} max./year											
Frequency Control Control Sensitivity	±3.0×10^{-6} to ±5.0×10^{-6}/Vcont=+1.4V±1V @Vcc≧+2.6V ±3.0×10^{-6} to ±5.0×10^{-6}/Vcont=+0.9V±0.6V @Vcc=+1.8V				–							
Response Slope	Positive				–							
Start up Time	2.0ms max.											
Output Enable Time	–								2.0ms max.			
Phase Noise Offset 100Hz Offset 1kHz Offset 10kHz Offset 100kHz	[f≦26MHz] -115dBc/Hz -130dBc/Hz -150dBc/Hz -155dBc/Hz				[26MHz<f≦40MHz] -110dBc/Hz -130dBc/Hz -150dBc/Hz -155dBc/Hz				[40MHz<f≦52MHz] -105dBc/Hz -125dBc/Hz -145dBc/Hz -150dBc/Hz			
Packing Unit (1)	DSA1612SDN/DSA211SDN/DSA221SDN, DSB1612SDN/DSB211SDN/DSB221SDN, DSB1612SDNB/DSB211SDNB/DSB221SDNB: 3000pcs./reel (φ180) DSA321SDN, DSB321SDN, DSB321SDNB: 2000pcs./reel (φ180)											

(1) Moisture prevention packing is unnecessary.
Moisture Sensitivity Level : LEVEL 1 (IPC/JEDEC J-STD-033)

Consult our sales representative for other specifications.

High-precision SMD VC-TCXO/TCXO

For Mobile communications/Industrial system/GPS/GNSS

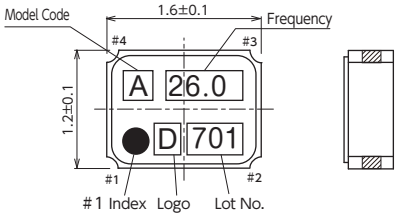
■ Dimensions

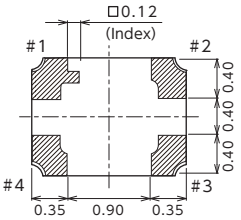
[mm]

■ DSA1612SDN/DSB1612SDN/DSB1612SDNB

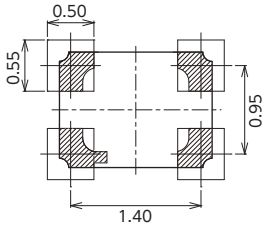
Model Code
A:VC-TCXO(DSA1612SDN)
B:TCXO(DSB1612SDN)
C:TCXO(DSB1612SDNB Stand-by Function)

Pin Connections	
Pin No.	Connection
#1	Vcont(VC-TCXO)/GND(TCXO) ENABLE/DISABLE (Stand-by Function)
#2	GND
#3	Output
#4	Vcc





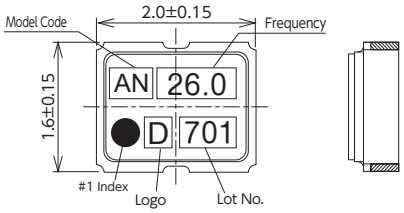
■ Recommended Land Pattern
<Top View>

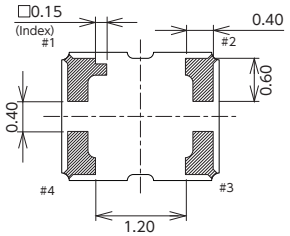


■ DSA211SDN/DSB211SDN/DSB211SDNB

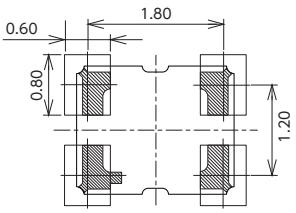
Model Code
AN : VC-TCXO (DSA211SDN)
BN : TCXO (DSB211SDN)
CN : TCXO (DSB211SDNB Stand-by Function)

Pin Connections	
Pin No.	Connection
#1	Vcont(VC-TCXO)/GND(TCXO) ENABLE/DISABLE (Stand-by Function)
#2	GND
#3	Output
#4	Vcc





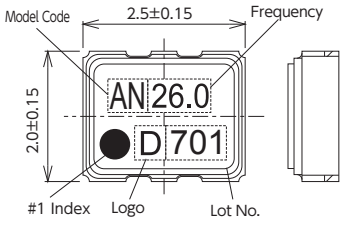
■ Recommended Land Pattern
<Top View>

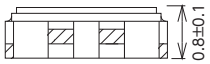


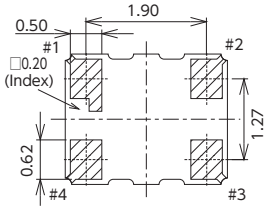
■ DSA221SDN/DSB221SDN/DSB221SDNB

Model Code
AN : VC-TCXO (DSA221SDN)
BN : TCXO (DSB221SDN)
CN : TCXO (DSB221SDNB Stand-by Function)

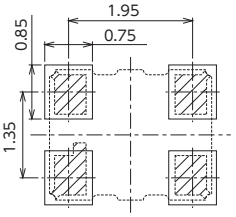
Pin Connections	
Pin No.	Connection
#1	Vcont(VC-TCXO)/GND(TCXO) ENABLE/DISABLE (Stand-by Function)
#2	GND
#3	Output
#4	Vcc







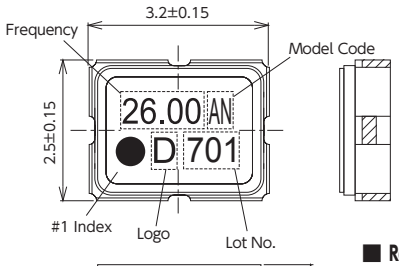
■ Recommended Land Pattern
<Top View>

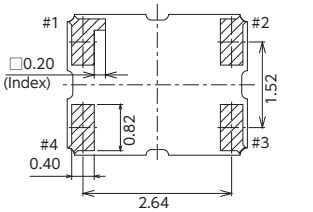


■ DSA321SDN/DSB321SDN/DSB321SDNB

Model Code
AN : VC-TCXO (DSA321SDN)
BN : TCXO (DSB321SDN)
CN : TCXO (DSB321SDNB Stand-by Function)

Pin Connections	
Pin No.	Connection
#1	Vcont(VC-TCXO)/GND(TCXO) ENABLE/DISABLE (Stand-by Function)
#2	GND
#3	Output
#4	Vcc





■ Recommended Land Pattern
<Top View>