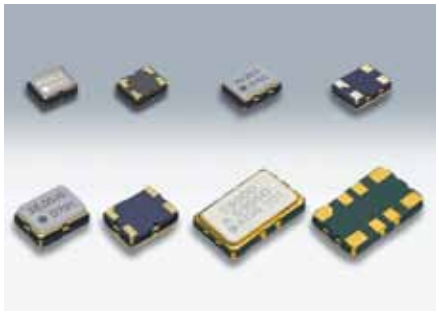
High-precision SMD VC-TCXO/TCXO

DSA211SDM/DSA221SDM/DSA321SDM/DSA535SD/
DSB211SDM/DSB221SDM/DSB321SDM/DSB211SDB/DSB221SDB/DSB321SDB/DSB535SD



Actual size DSA211SDM DSA221SDM DSA321SDM DSA535SD

■ Features

- Low voltage operation
- Low phase noise
- Single package 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 HSPA)
- GPS and Industrial radio communications

[Type]

VC-TCXO	TCXO	TCXO(Stand-by Function)	Size
DSA211SDM	DSB211SDM	DSB211SDB	2016 size
DSA221SDM	DSB221SDM	DSB221SDB	2520 size
DSA321SDM	DSB321SDM	DSB321SDB	3225 size
DSA535SD	DSB535SD	–	5032 size

■ Standard Specification

Item \ Type	VC-TCXO				TCXO						
	DSA211SDM	DSA221SDM	DSA321SDM	DSA535SD	DSB211SDM	DSB221SDM	DSB321SDM	DSB211SDB (Stand-by Function)	DSB221SDB (Stand-by Function)	DSB321SDB (Stand-by Function)	DSB535SD
Frequency Range	12.288~52MHz	9.6~52MHz		9.6~40MHz	12.288~52MHz	9.6~52MHz		12.288~52MHz	9.6~52MHz		9.6~40MHz
Standard Frequency	19.2/ 26/ 38.4/ 40/ 52MHz			13/ 19.2/ 26MHz	16.3676/ 16.367667/ 16.368/ 16.369/ 16.8/ 26/ 33.6MHz						
Supply Voltage Range	+1.7~+3.5V			+2.3~+5.5V	+1.7~+3.5V						+2.3~+5.5V
Supply Voltage(Vcc)	+1.8V/ +2.6V/ +2.8V/ +3.0V/ +3.3V			+2.6V/+2.8V/+3.0V/+3.3V	+1.8V/ +2.6V/ +2.8V/ +3.0V/ +3.3V						+2.6V/ +2.8V/ +3.0V/ +3.3V
Current Consumption	+1.5 mA max.(f≦26MHz)/ +2.0 mA max.(f>26MHz)										
Stand-by Current	–				–			+3.0μA max.			–
Output Level	0.8 Vp-p min.(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} max. / −30~+85℃ ±1.0×10^{-6} max. / −40~+85℃(Option)				±0.5×10^{-6} max. / −30~+85℃ ±0.5×10^{-6} max. / −40~+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}~±5.0×10^{-6} / Vcont=+1.4±1V @Vcc≧+2.6V ±3.0×10^{-6}~±5.0×10^{-6} / Vcont=+0.9±0.6V @Vcc=+1.8V				–						
Response Slope	Positive				–						
Start up Time	2.0ms max.										
Output Enable Time	–				–			2.0ms max.			–
Phase Noise	[f≦15MHz]				[15MHz<f≦26MHz]			[26MHz<f≦40MHz]			
Offset 100Hz	−115dBc/Hz				−110dBc/Hz			−105dBc/Hz			
Offset 1kHz	−135dBc/Hz				−130dBc/Hz			−125dBc/Hz			
Offset 10kHz	−145dBc/Hz				−140dBc/Hz			−135dBc/Hz			
Offset 100kHz	−145dBc/Hz				−145dBc/Hz			−145dBc/Hz			
Packing Unit	2000pcs./reel(φ180)			4000pcs./reel (φ330)	2000pcs./reel(φ180)						4000pcs./reel (φ330)

Consult our sales representative for other specifications.

High-precision SMD VC-TCXO/TCXO

For Mobile communications/Industrial system/GPS

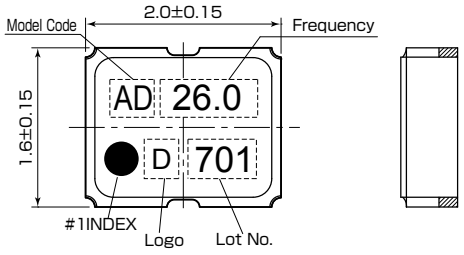
■ Dimensions[mm]

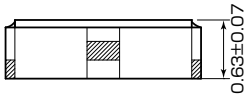
DSA211SDM/DSB211SDM/DSB211SDB

Model Code
AD : VC-TCXO (DSA211SDM)
BD : TCXO (DSB211SDM)
L : TCXO (DSB211SDB Stand-by Function)

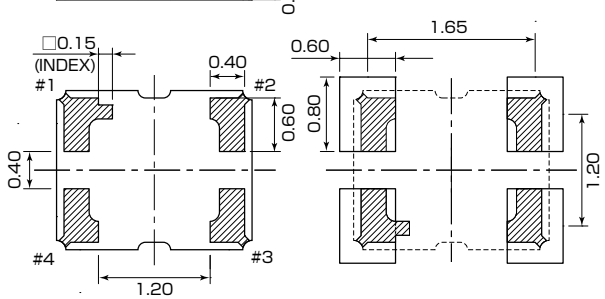
Pin Connections

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>

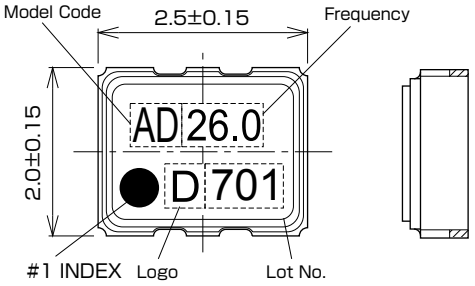


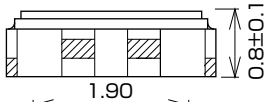
DSA221SDM/DSB221SDM/DSB221SDB

Model Code
AD : VC-TCXO (DSA221SDM)
BD : TCXO (DSB221SDM)
L : TCXO (DSB221SDB Stand-by Function)

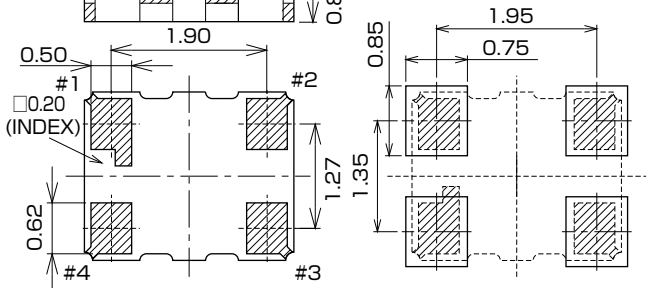
Pin Connections

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>

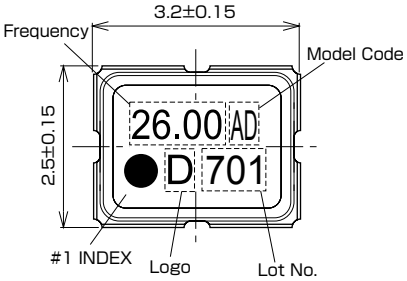


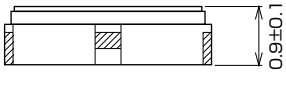
DSA321SDM/DSB321SDM/DSB321SDB

Model Code
AD : VC-TCXO (DSA321SDM)
BD : TCXO (DSB321SDM)
U : TCXO (DSB321SDB Stand-by Function)

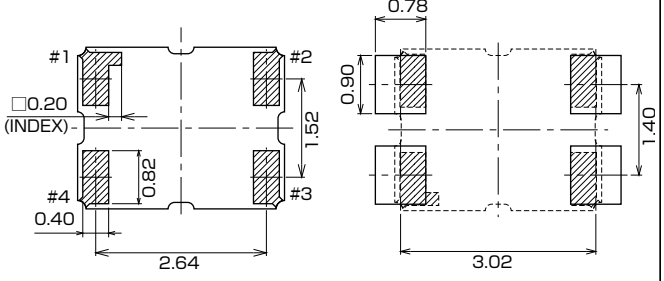
Pin Connections

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>

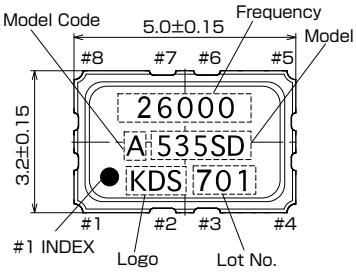


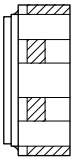
DSA535SD/DSB535SD

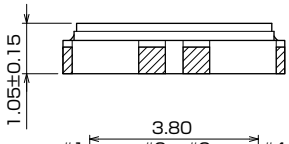
Model Code
A: VC-TCXO (DSA535SD)
B: TCXO (DSB535SD)

Pin Connections

Pin No.	Connection
#1	Vcont(VC-TCXO)/GND(TCXO)
#2	N.C.(Test Terminal)
#3	N.C.(Test Terminal)
#4	GND
#5	Output
#6	N.C.(Test Terminal)
#7	N.C.(Test Terminal)
#8	Vcc







■ Recommended Land Pattern
<Top View>