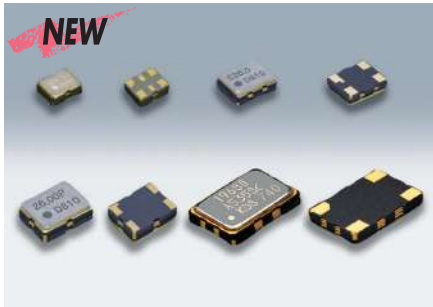


# SMD VC-TCXO/TCXO

DSA211SCA/DSA221SCA/DSA321SCA/DSA535SC  
DSB211SCA/DSB221SCA/DSB321SCA/DSB535SC for Mobile communications



Actual size DSA211SCA DSA221SCA DSA321SCA DSA535SC

## ■ Features

- Wide voltage range, Supply voltage up to +2.3~+5.5V
- Low phase noise
- Single packaged structure
- 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, GPRS, PHS)
- Other wireless radio communications (e.g. Mobile WiMAX)

[Type]

VC-TCXO	TCXO	Size
DSA211SCA	DSB211SCA	2016 size
DSA221SCA	DSB221SCA	2520 size
DSA321SCA	DSB321SCA	3225 size
DSA535SC	DSB535SC	5032 size

## ■ Standard Specification

Item	Type	VC-TCXO				TCXO			
		DSA211SCA	DSA221SCA	DSA321SCA	DSA535SC	DSB211SCA	DSB221SCA	DSB321SCA	DSB535SC
Frequency Range		13~52MHz	9.6~52MHz		10~30MHz	13~52MHz	9.6~52MHz		10~30MHz
Standard Frequency		13/ 19.2/ 20/ 26/ 38.4/ 40/ 52MHz			13/ 19.2/ 26MHz	13/ 19.2/ 20/ 26/ 38.4/ 40/ 52MHz			13/ 19.2/ 26MHz
Supply Voltage (Vdd)		+2.6V/ +2.8V/ +3.0V/ +3.3V							
Current Consumption		+1.5mA max. (f≤26MHz) +2.0mA max. (f>26MHz)			+1.1mA max. (F≤15MHz) +1.3mA max. (F>15MHz)	+1.5mA max. (f≤26MHz) +2.0mA max. (f>26MHz)			+1.1mA max. (F≤15MHz) +1.3mA max. (F>15MHz)
Output Level		0.8Vp-p min. (Clipped Sinewave / DC-coupled)							
Output Load		10kΩ//10pF							
Frequency Stability		±1.5×10 <sup>-6</sup> max. (After 2 reflows)							
Tolerance		±2.0×10 <sup>-6</sup> max./ -30~+85°C @CDMA ±2.5×10 <sup>-6</sup> max./ -30~+85°C @GSM							
vs. Temperature									
vs. Supply Voltage		±0.2×10 <sup>-6</sup> max. (Vdd±5%)							
vs. Load Variation		±0.2×10 <sup>-6</sup> max. (10kΩ//10pF±10%)							
vs. Aging		±1.0×10 <sup>-6</sup> max. /year							
Start Up Time		2.0ms max.							
Frequency Control									
Control Sensitivity		±7.8×10 <sup>-6</sup> ~ ±12×10 <sup>-6</sup> / Vcont=+1.4V±1V @CDMA ±9.0×10 <sup>-6</sup> ~ ±15×10 <sup>-6</sup> / Vcont=+1.5V±1V @GSM				-			
Response Slope		Positive				-			
Phase Noise		[f≤15MHz] [15<f≤26MHz] [26<f≤40MHz]			[f≤15MHz] [f≤15MHz]	[f≤15MHz] [15<f≤26MHz] [26<f≤40MHz]			[f≤15MHz] [f≤15MHz]
Offset 100Hz		-115dBc/Hz -110dBc/Hz -105dBc/Hz			-110dBc/Hz -105dBc/Hz	-115dBc/Hz -110dBc/Hz -105dBc/Hz			-110dBc/Hz -105dBc/Hz
Offset 1kHz		-135dBc/Hz -130dBc/Hz -125dBc/Hz			-130dBc/Hz -125dBc/Hz	-135dBc/Hz -130dBc/Hz -125dBc/Hz			-130dBc/Hz -125dBc/Hz
Offset 10kHz		-145dBc/Hz -140dBc/Hz -135dBc/Hz			-145dBc/Hz -140dBc/Hz	-145dBc/Hz -140dBc/Hz -135dBc/Hz			-145dBc/Hz -140dBc/Hz
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Packing Unit		2000pcs./reel (φ180)			4000pcs./reel (φ330)	2000pcs./reel (φ180)			4000pcs./reel (φ330)

Consult our sales representative for other specifications.

# SMD VC-TCXO/TCXO

DSA211SCA/DSA221SCA/DSA321SCA/DSA535SC  
 DSB211SCA/DSB221SCA/DSB321SCA/DSB535SC for Mobile communications

## ■ Dimensions[mm]

DSA211SCA/DSB211SCA		DSA221SCA/DSB221SCA																									
Model Code A : VC-TCXO (DSA211SCA) B : TCXO (DSB211SCA)	<table border="1"> <thead> <tr> <th>Pin No.</th> <th>Connection</th> </tr> </thead> <tbody> <tr><td>#1</td><td>Vcont(VC-TCXO)/GND(TCXO)</td></tr> <tr><td>#2</td><td>N.C./GND(Test Terminal)</td></tr> <tr><td>#3</td><td>GND</td></tr> <tr><td>#4</td><td>Output</td></tr> <tr><td>#5</td><td>N.C./GND(Test Terminal)</td></tr> <tr><td>#6</td><td>Vdd</td></tr> </tbody> </table>	Pin No.	Connection	#1	Vcont(VC-TCXO)/GND(TCXO)	#2	N.C./GND(Test Terminal)	#3	GND	#4	Output	#5	N.C./GND(Test Terminal)	#6	Vdd	Model Code E : VC-TCXO (DSA221SCA) F : TCXO (DSB221SCA)	<table border="1"> <thead> <tr> <th>Pin No.</th> <th>Connection</th> </tr> </thead> <tbody> <tr><td>#1</td><td>Vcont(VC-TCXO)/GND(TCXO)</td></tr> <tr><td>#2</td><td>GND</td></tr> <tr><td>#3</td><td>Output</td></tr> <tr><td>#4</td><td>Vdd</td></tr> </tbody> </table>	Pin No.	Connection	#1	Vcont(VC-TCXO)/GND(TCXO)	#2	GND	#3	Output	#4	Vdd
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