

Temperature Compensated Crystal Oscillators (TCXO) Surface Mount Type TCXO (LSI Type) KT2520Y Series



2.5×2.0mm



Ph Free

RoHS Compliant

Features

- Ultra-miniature SMD type (2.5×2.0×0.9mm)
- AFC function available
- Frequency stability
: $\pm 2.0 \times 10^{-6}$ / -30 to +85°C
- 2.3 to 3.5V drive available
- Reflow compatible

Applications

- 3G (CDMA, W-CDMA), GPRS, GSM

How to Order

KT2520Y 26000 D C W 28 T xx
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

- ① Series
② Output Frequency
③ Frequency Tolerance

B	$\pm 1.0 \times 10^{-6}$
C	$\pm 1.5 \times 10^{-6}$
D	$\pm 2.0 \times 10^{-6}$

- ④ Lower Operating Temp.

C	-30°C
E	-20°C
G	-10°C

- ⑤ Upper Operating Temp.

W	+85°C
V	+80°C
U	+75°C

- ⑥ Supply Voltage

28	2.8V	30	3.0V
----	------	----	------

- ⑦ Voltage Control Range

TCXO	T
VCTCXO	Customer Spec.

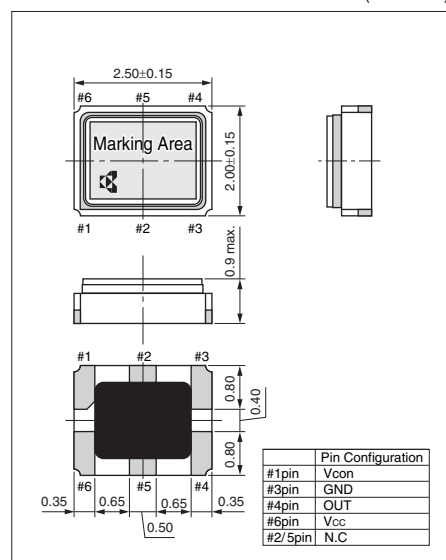
- ⑧ Option Code

Specifications

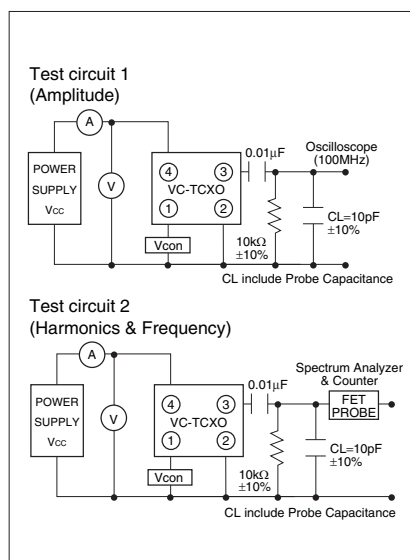
Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	Fo	Standard Frequency: 13, 19.2, 26, 38.4	13	40	MHz
Frequency Tolerance	F _{tol}	vs Temperature	-2	+2	$\times 10^{-6}$
		vs Load	-0.2	+0.2	
		vs Voltage	-0.3	+0.3	
Frequency Aging	F _{aging}	Per Year	-1	+1	$\times 10^{-6}$
Storage Temperature Range	T _{stg}		-40	+85	°C
Operating Temperature Range	T _{use}		-30	+85	°C
Voltage Control Range	F _{cont}	Positive	± 8	± 15	$\times 10^{-6}$
Supply Voltage	V _{cc}		2.3	3.5	V
Output Level	V _{pp}	10k ohm // 10pF	0.8	—	Vp-p
Current Consumption	I _{cc}		—	2	mA
Symmetry	SYM	@50% V _{cc}	40	60	%
Harmonics	—		—	-5	dBc

Dimensions

(Unit: mm)

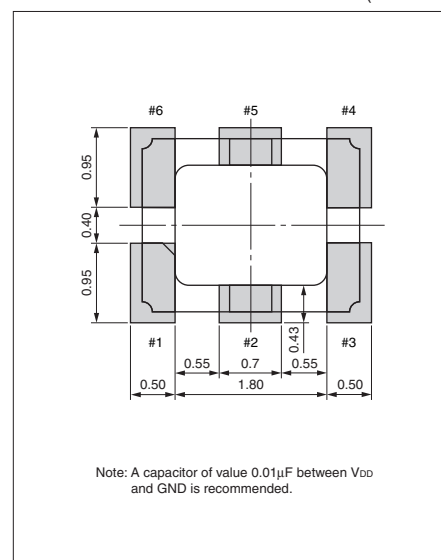


Test Circuit



Recommended Land Pattern

(Unit: mm)



Temperature Compensated Crystal Oscillators (TCXO) Surface Mount Type TCXO (LSI Type) KT2520Y Series for GPS



2.5×2.0mm



Ph Free

RoHS Compliant

Features

- Ultra-miniature SMD type (2.5×2.0×0.9mm)
- Frequency stability : $\pm 0.5 \times 10^{-6}$ / -30 to +85°C
- 2.3 to 3.5V drive available
- Reflow compatible

Applications

- GPS Units

How to Order

KT2520Y 16369 A C W 28 T xx
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

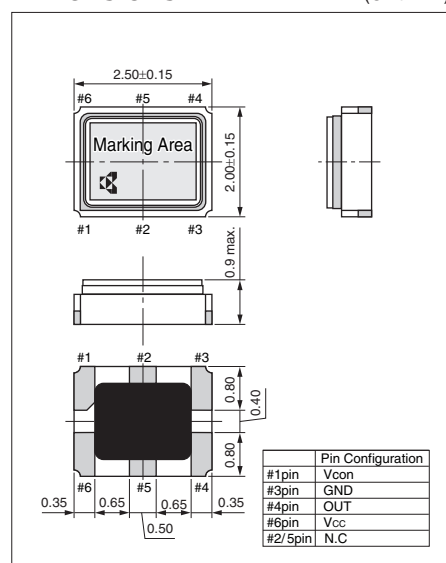
① Series	⑥ Supply Voltage
② Output Frequency	28 2.8V 30 3.0V
③ Frequency Tolerance	⑦ Voltage Control Range
A $\pm 0.5 \times 10^{-6}$	TCXO T
④ Lower Operating Temp.	⑧ Option Code
C -30°C	
E -20°C	
G -10°C	
⑤ Upper Operating Temp.	
W +85°C	
V +80°C	
U +75°C	

Specifications

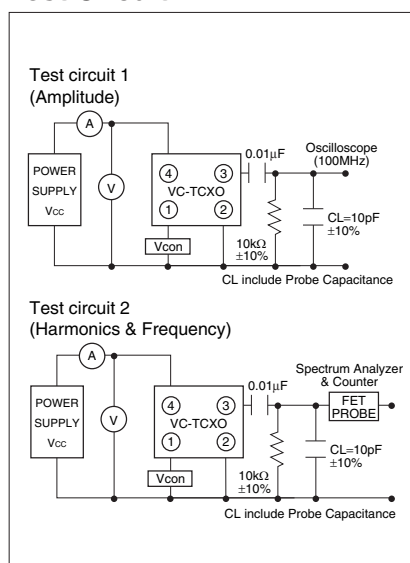
Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	Fo	Standard Frequency: 16.369, 19.2, 24.5535, 26, 27.456			MHz
Frequency Tolerance	F _{tol}	vs Temperature	-0.5	+0.5	$\times 10^{-6}$
		vs Load	-0.2	+0.2	
		vs Voltage	-0.3	+0.3	
Frequency Aging	F _{aging}	Per Year	-1	+1	$\times 10^{-6}$
Storage Temperature Range	T _{stg}		-40	+85	°C
Operating Temperature Range	T _{use}		-30	+85	°C
Supply Voltage	V _{CC}		2.3	3.5	V
Output Level	V _{pp}	10k ohm // 10pF	0.8	—	Vp-p
Current Consumption	I _{CC}		—	2	mA
Symmetry	SYM	@ 50% V _{CC}	40	60	%
Harmonics	—		—	-5	dBc

Dimensions

(Unit: mm)

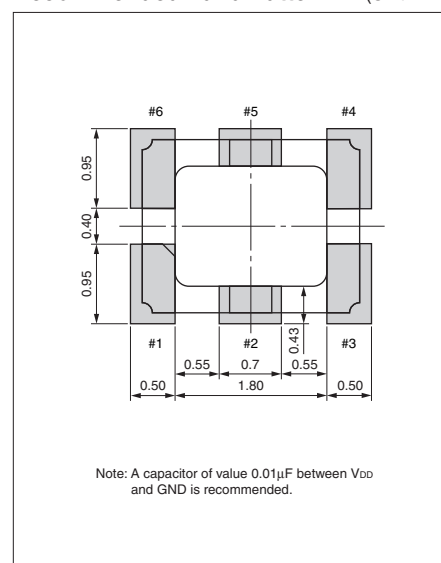


Test Circuit



Recommended Land Pattern

(Unit: mm)



Temperature Compensated Crystal Oscillators (TCXO) Surface Mount Type TCXO (LSI Type) KT3225 Series



3.2×2.5mm



Ph Free

RoHS Compliant

Features

- Ultra-miniature SMD type (3.2×2.5×1.0mm)
- Reflow compatible
- AFC function available
- 2.3 to 3.5V drive available
- Frequency stability : $\pm 2.0 \times 10^{-6}$ / -30 to +85°C

Applications

- 3G (CDMA, W-CDMA), GPRS, GSM

How to Order

KT3225P 26000 D C W 28 T xx
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

② Output Frequency

③ Frequency Tolerance

B	$\pm 1.0 \times 10^{-6}$
C	$\pm 1.5 \times 10^{-6}$
D	$\pm 2.0 \times 10^{-6}$

④ Lower Operating Temp.

C	-30°C
E	-20°C
G	-10°C

⑤ Upper Operating Temp.

W	+85°C
V	+80°C
U	+75°C

⑥ Supply Voltage

28	2.8V	30	3.0V
----	------	----	------

⑦ Voltage Control Range

TCXO	T
VCTCXO	Customer Spec.

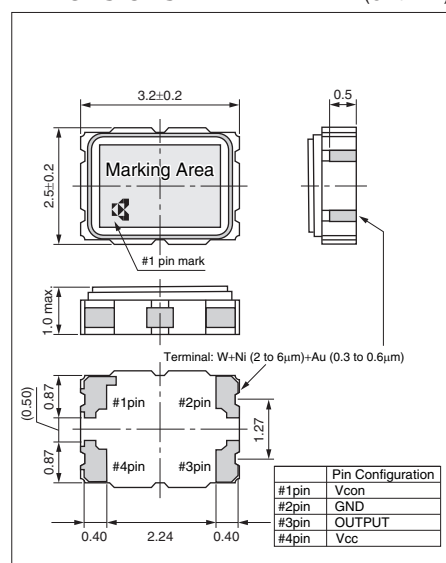
⑧ Option Code

Specifications

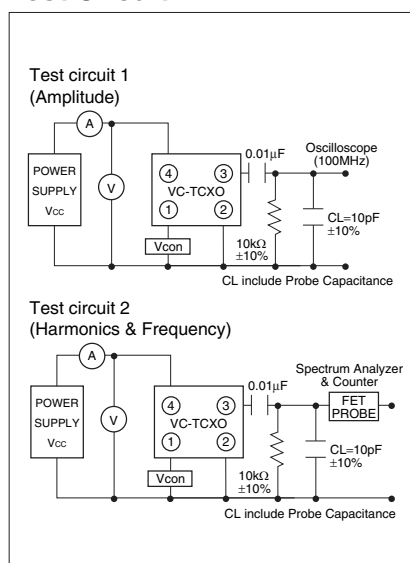
Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	Fo	Standard Frequency: 13, 19.2, 26, 38.4	13	40	MHz
Frequency Tolerance	F _{tol}	vs Temperature	-2	+2	$\times 10^{-6}$
		vs Load	-0.2	+0.2	
		vs Voltage	-0.3	+0.3	
Frequency Aging	F _{aging}	Per Year	-1	+1	$\times 10^{-6}$
Storage Temperature Range	T _{stg}		-40	+85	°C
Operating Temperature Range	T _{use}		-30	+85	°C
Voltage Control Range	F _{cont}	Positive	± 8	± 15	$\times 10^{-6}$
Supply Voltage	V _{cc}		2.3	3.5	V
Output Level	V _{pp}	10k ohm // 10pF	0.8	—	Vp-p
Current Consumption	I _{cc}		—	2	mA
Symmetry	SYM	@50% V _{cc}	40	60	%
Harmonics	—		—	-5	dBc

Dimensions

(Unit: mm)

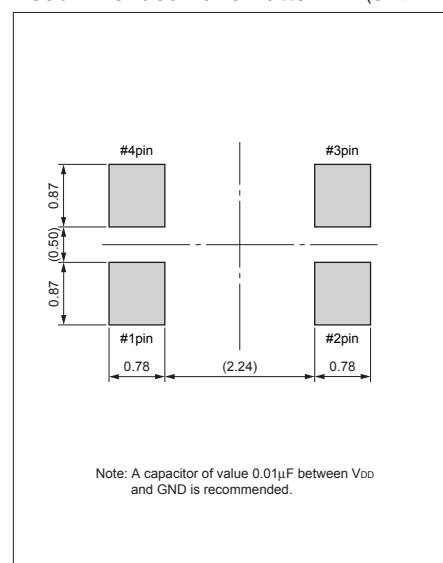


Test Circuit



Recommended Land Pattern

(Unit: mm)



Temperature Compensated Crystal Oscillators (TCXO) Surface Mount Type TCXO (LSI Type) KT3225 Series for GPS



3.2×2.5mm



Ph Free

RoHS Compliant

Features

- Ultra-miniature SMD type (3.2×2.5×1.0mm)
- Frequency stability : $\pm 0.5 \times 10^{-6}$ / -30 to +85°C
- 2.3 to 3.5V drive available
- Reflow compatible

Applications

- GPS Units

How to Order

KT3225F 16369 A C W 28 T xx
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

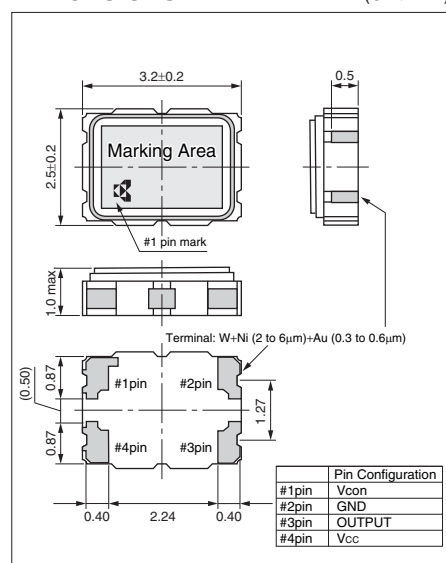
① Series	⑥ Supply Voltage
② Output Frequency	28 2.8V 30 3.0V
③ Frequency Tolerance	⑦ Voltage Control Range
A $\pm 0.5 \times 10^{-6}$	TCXO T
④ Lower Operating Temp.	⑧ Option Code
C -30°C	
E -20°C	
G -10°C	
⑤ Upper Operating Temp.	
W +85°C	
V +80°C	
U +75°C	

Specifications

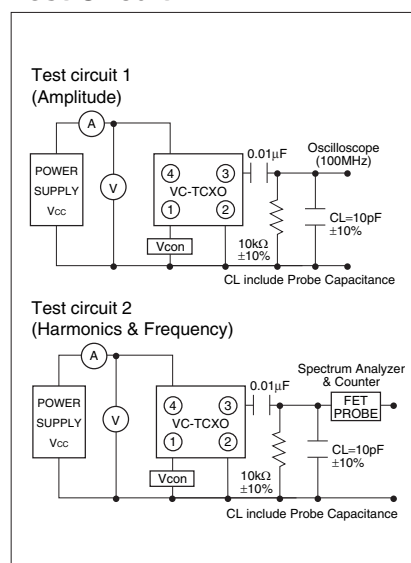
Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	Fo	Standard Frequency: 16.369, 19.2, 24.5535, 26, 27.456			MHz
Frequency Tolerance	F _{tol}	vs Temperature	-0.5	+0.5	$\times 10^{-6}$
		vs Load	-0.2	+0.2	
		vs Voltage	-0.3	+0.3	
Frequency Aging	F _{aging}	Per Year	-1	+1	$\times 10^{-6}$
Storage Temperature Range	T _{stg}		-40	+85	°C
Operating Temperature Range	T _{use}		-30	+85	°C
Supply Voltage	V _{CC}		2.3	3.5	V
Output Level	V _{pp}	10k ohm // 10pF	0.8	—	Vp-p
Current Consumption	I _{CC}		—	2	mA
Symmetry	SYM	@ 50% V _{CC}	40	60	%
Harmonics	—		—	-5	dBc

Dimensions

(Unit: mm)

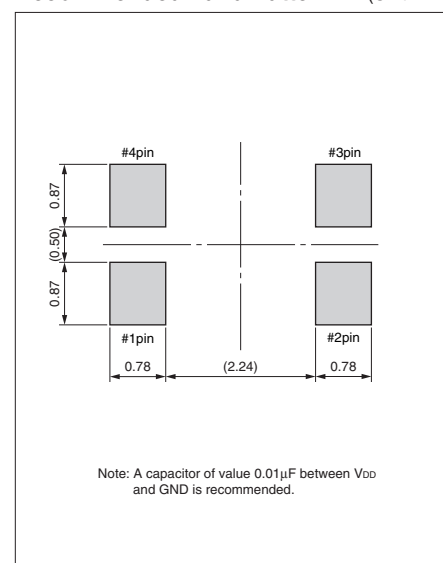


Test Circuit



Recommended Land Pattern

(Unit: mm)



Temperature Compensated Crystal Oscillators (TCXO) Surface Mount Type TCXO (LSI Type) KT5032 Series



5.0×3.2mm



Ph Free

RoHS Compliant

Features

- Ultra-miniature SMD type
(5.0×3.2×1.5mm)
- Reflow compatible
- AFC function available
- 2.3 to 5.5V drive available
- Frequency stability
: $\pm 2.0 \times 10^{-6}$ / -30 to +85°C

Applications

- PDC, GSM, CDMA

How to Order

KT5032N 26000 D C W 28 T xx
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

② Output Frequency

③ Frequency Tolerance

B	$\pm 1.0 \times 10^{-6}$
C	$\pm 1.5 \times 10^{-6}$
D	$\pm 2.0 \times 10^{-6}$

④ Lower Operating Temp.

C	-30°C
E	-20°C
G	-10°C

⑤ Upper Operating Temp.

W	+85°C
V	+80°C
U	+75°C

⑥ Supply Voltage

28	2.8V	30	3.0V
----	------	----	------

⑦ Voltage Control Range

TCXO	T
VCTCXO	Customer Spec.

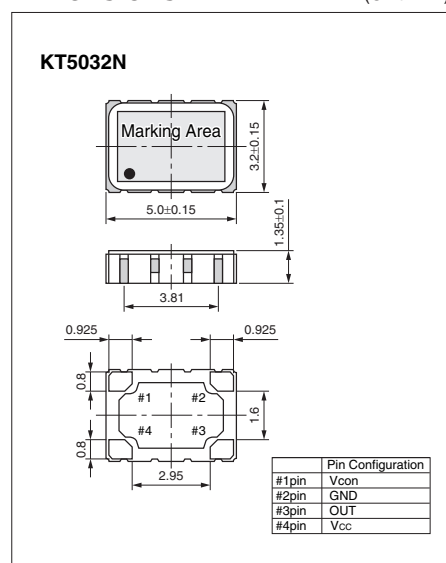
⑧ Option Code

Specifications

Item	Symbol	Conditions	Min.	Max.	Units
Output Frequency Range	Fo	Standard Frequency: 13, 19.2, 26, 38.4	13	40	MHz
Frequency Tolerance	F _{tol}	vs Temperature	-2	+2	$\times 10^{-6}$
		vs Load	-0.2	+0.2	
		vs Voltage	-0.3	+0.3	
Frequency Aging	F _{aging}	Per Year	-1	+1	$\times 10^{-6}$
Storage Temperature Range	T _{stg}		-40	+85	°C
Operating Temperature Range	T _{use}		-30	+85	°C
Voltage Control Range	F _{cont}	Positive	± 8	± 15	$\times 10^{-6}$
Supply Voltage	V _{cc}		2.3	5.5	V
Output Level	V _{pp}	10k ohm // 10pF	0.8	—	Vp-p
Current Consumption	I _{cc}		—	2	mA
Symmetry	SYM	@50% V _{cc}	40	60	%
Harmonics	—		—	-5	dBc

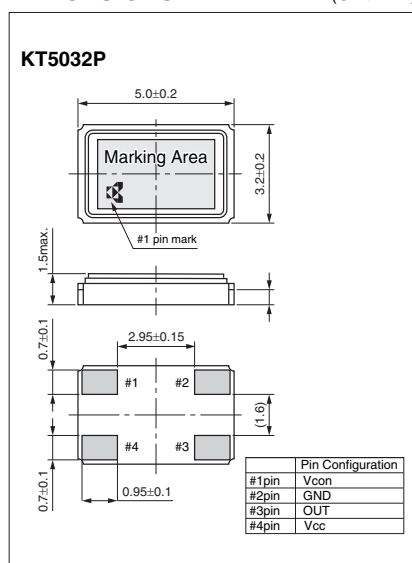
Dimensions

(Unit: mm)



Dimensions

(Unit: mm)



Recommended Land Pattern

(Unit: mm)

