3C Series 3.2 x 2.5 mm SMD Crystal Oscillator

3 : 3.2×2.5×0.95 mm | SMD3225-4P C : SPXO Crystal Oscillator

Feature

- Miniature Ceramic surface mount with Metal Lid
- CMOS compatible logic levels
- Tri-state function available
- Supply voltage range : 1.62V ~ 5.5V(Compatible with 1.8V, 2.5V, 3.3V , 5.0V)
- RoHS Compliant / Pb Free

Applications

- Wireless Devices
- Internet of Things (IoT) devices
- Ethernet/Gigabit Ethernet
- Audio, Video, Gaming products
- Micro base station

Electrical Specifications

Item	Symb.	Min.	Typ.	Max.	Unit	Notes
Frequency Range	Freq.	1.000		160.000	MHz	
Operating Temperature	T_use	-20		70	°C	
		-40		85	°C	
StorageTemperature Range	T_stg	-55		125	°C	
Supply Voltage	Vdd	1.62	1.8/2.5/3.3/5.0	5.5	V	
Output Load	L_CMOS		15		pF	
Current Consumption	Icc			10	mA	1MHz ⩽ Freq. < 40MHz
				20		40MHz ⩽ Freq. < 80MHz
				40		80MHz ⩽ Freq. < 160MHz
Duty Cycle	SYM	45		55	%	50 % Vdd level, L_CMOS ⩽ 15 pF
Rise / Fall Time	T_R / T_F			5	nS	10% Vdd to 90% Level
Start-up Time	T_str			5	mS	To 90% of Final Amplitude
High output voltage	V_{OH}	0.9Vdd			V	
Low output voltage	V_{OL}			0.1Vdd	V	
Enable Voltage High (Logic 1)	V_{IH}	0.7Vdd			V	Output will be disable if OE is Logic 0 Output will be enable if OE is Logic 1 or open
Enable Voltage Low (Logic 0)	V_{IL}			0.3Vdd	V	
Aging	f_age			3	ppm	1st. Year at 25°C

Frequency Stability & Operating Temperature Range

Temp. \ FT	±20ppm	±25ppm	±30ppm	±50ppm
-20°C to +70°C	△	★	★	★
-40°C to +85°C		△	★	★

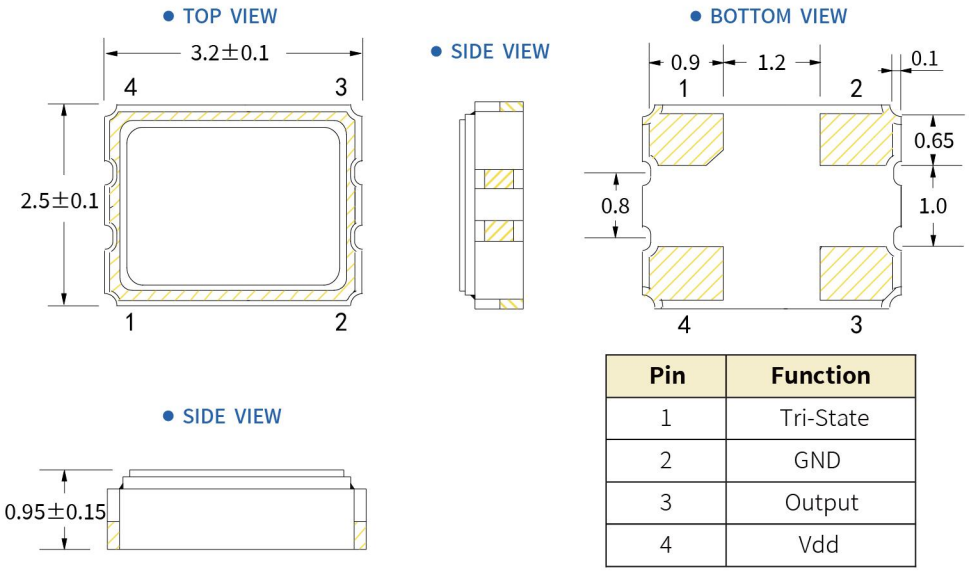
★: Available △: Conditional

All condition: Include 25°C tolerance, operating temperature range , input voltage change, aging, load change.

3C Series 3.2 x 2.5 mm SMD Crystal Oscillator

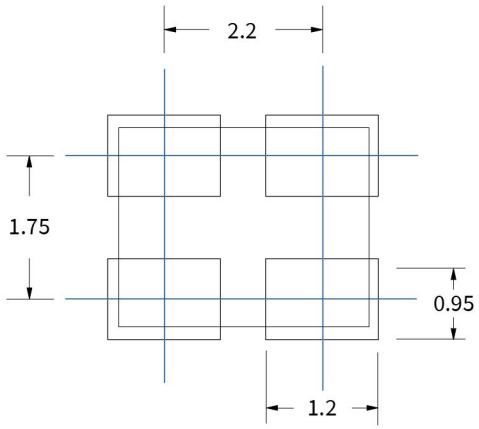
3 : 3.2×2.5×0.95 mm | SMD3225-4P C : SPXO Crystal Oscillator

Dimensions (UNIT:mm)



Pin	Function
1	Tri-State
2	GND
3	Output
4	Vdd

Solder pad layout (UNIT:mm)



Options and Part Identification : Example SX3M1.000B20F30TNN

Company	Ceramic Package	Frequency Code [MHz]	Supply Voltage	Frequency Tolerance	Operating Temperature	Frequency Drift	Output	Current Consumption	Phase Noise
SX	3M	X.XXX	B	20	F	30	T	N	N

Code	Company
SX	SCTF

Frequency
1.000
13.560
19.200
37.125

Code	Frequency Tolerance
10	±10ppm
20	±20ppm

Code	Frequency Drift
15	±15ppm
20	±20ppm
30	±30ppm

Code	Current
N	Standard

Code	Ceramic Package
1M	2.0×1.6×0.75mm
2M	2.5×2.0×0.81mm
3M	3.2×2.5×0.95mm
5M	5.0×3.2×1.2mm
7M	7.0×5.0×1.3mm
OA	12.7×12.7×5.4 mm[PXO-8]
OB	20.4×12.8×4.9 mm [PXO-14]

Code	Voltage
D	1.8V
H	2.5V
B	3.3V
A	5.0V

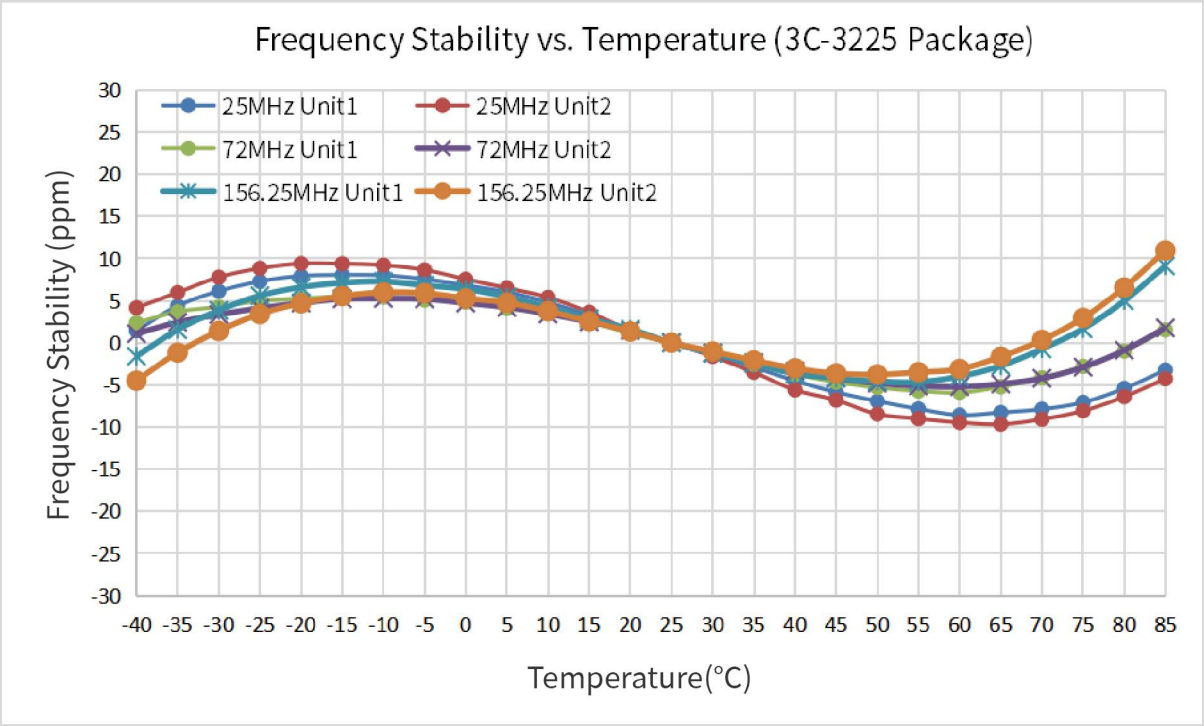
Code	Operating Temperature
E	-20°C ~ +70°C
F	-40°C ~ +85°C

Code	Output
T	CMOS 15pF
H	CMOS 30pF
G	CMOS 50pF

Code	Phase Noise
N	Standard

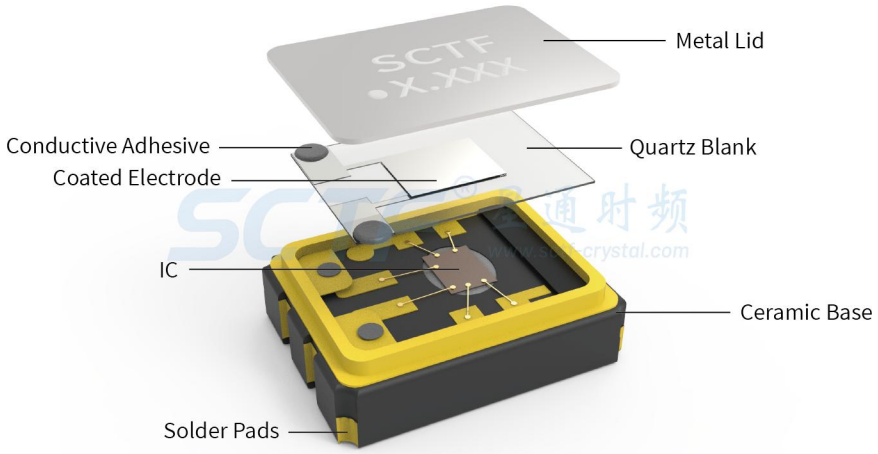
If you have other parameter requirements, you can contact **SCTF** at any time.

Frequency Temperature Characteristics

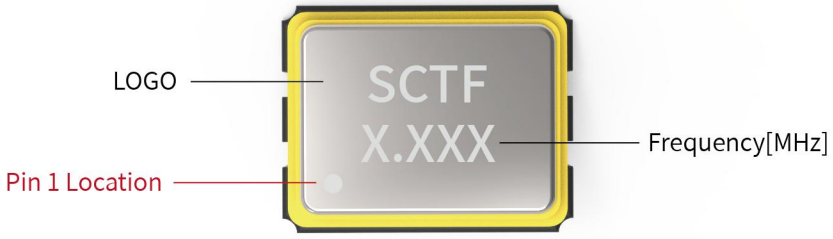


Product Structure&Marking Information

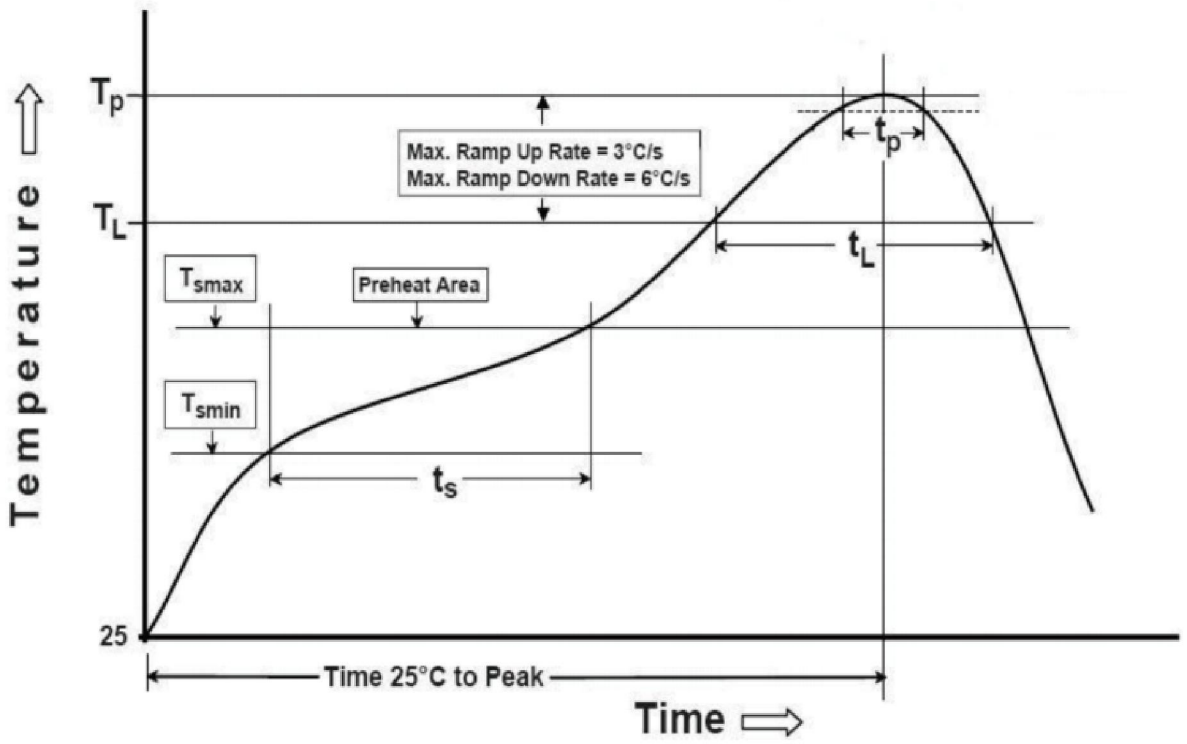
- Product Structure



- Marking Information

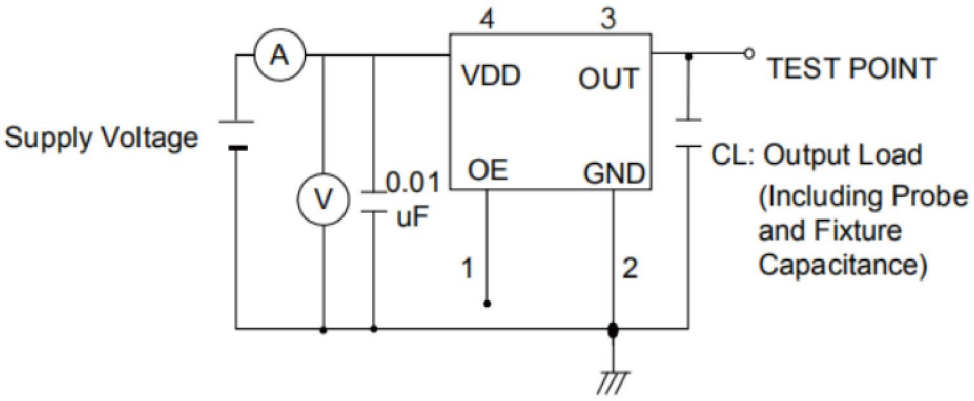


Suggested Reflow Profile



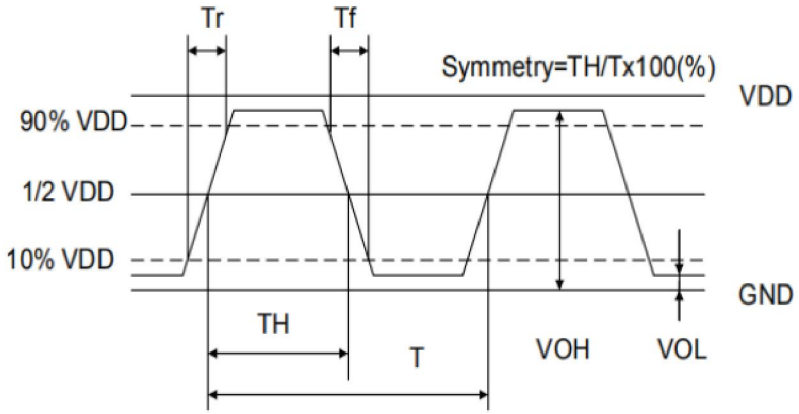
Profile Feature	Sn - Pb Eutectic Assembly	Preheat / Soak
Preheat / Soak ● Temperature Min (Ts min) ● Temperature Max (Ts max) ● Time (Ts min to Ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-120 seconds
Ramp - up rate (TL to Tp)	3°C/ second max.	3°C/ second max.
Time maintained above ● Liquidous temperature (TL) ● Time (tL) maintained above TL	183°C 60-150 seconds	217°C 60-150 seconds
Peak package body temperature (Tp)	235°C	260°C
Time within 5° C of the specified classification temperature (Tp)	20 seconds	30 seconds
Ramp - down rate (Tp to TL)	6°C/ second max.	6°C/ second max.
Time 25° C to peak temperature	6 minutes max.	8 minutes max.
Suggust reflow times	**2 Times max.**	

Testing Circuit



※ Notes: PIN 1 connected to Vdd or floating, the product is working properly;connected to GND,stops working.

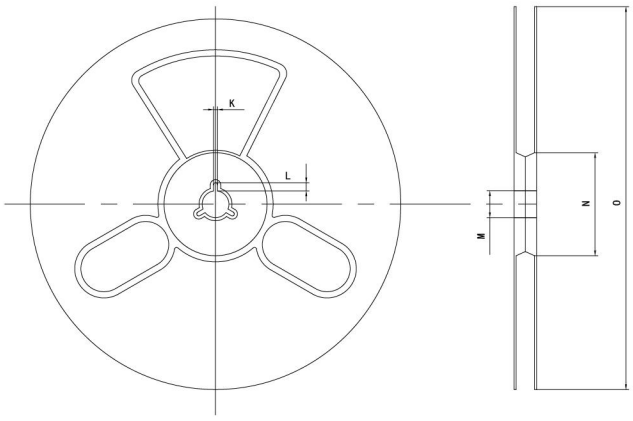
Waveform Conditions

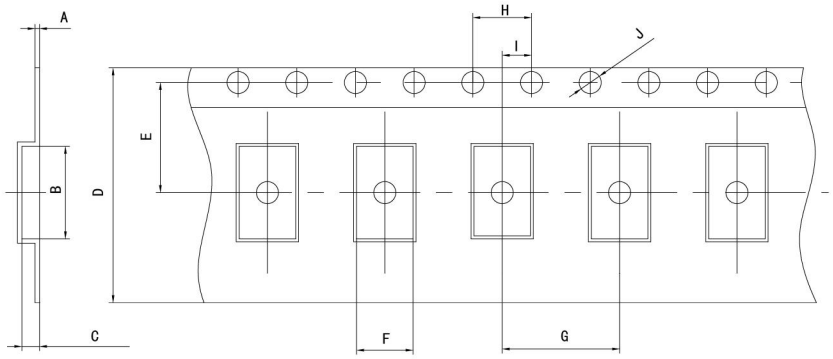


Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.

Packaging Information

T=Tape and reel (3,000pcs/reel)





Pocket Tape Dimensions(mm)

Series	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
3C	0.25±0.05	3.5±0.1	1.4±0.1	8.0±0.1	3.5±0.1	2.70±0.1	4.0±0.1	4.0±0.1	2.0±0.1	ϕ1.5±0.1	2.0±0.2	4.0±1.0	ϕ13±0.5	ϕ60±1	ϕ180±1

Common Frequencies – MHz

3C Series				
1.000	1.024	1.8432	2.000	2.048
2.176	2.4576	2.500	3.072	3.579545
3.6864	4.000	4.096	4.9152	5.000
5.5296	6.000	6.144	6.7458	6.780
7.200	7.3728	7.680	8.000	8.192
10.000	11.0592	11.2896	12.000	12.288
12.500	13.000	13.560	14.31818	14.7456
16.000	16.384	18.432	19.200	19.6608
20.000	22.1184	22.5792	24.000	24.576
25.000	26.000	27.000	27.120	28.63636
29.4912	30.000	32.000	32.768	33.000
33.330	33.333	33.3333	36.000	37.125
37.400	38.400	38.880	40.000	40.680
45.000	45.1584	48.000	49.152	50.000
54.000	60.000	64.000	65.536	66.000
66.666	72.000	75.000	80.000	96.000
100.000	125.000	133.000	148.500	156.250

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Standard Clock Oscillators ***category:***

Click to view products by SCTF ***manufacturer:***

Other Similar products are found below :

601252 F335-25 F535L-33.333 F535L-50 NBXDBB017LN1TAG NBXHBA019LN1TAG SiT1602BI-22-33E-50.000000E SiT8209AI-32-33E-125.000000 SIT8918AA-11-33S-50.000000G F335-24 F535L-12 F535L-24 PE7744DW-100.0M SiT8503AI-18-33E-0.200000X SIT8918AA-11-33S-16.000000G SIT9122AI2C233E300.000000X 9120AC-2D2-33E212.500000 SIT8920AM-31-33E-25.0000 9102AI-233N33E100.00000X 9102AI-232H25S125.00000 9102AI-133N25E200.00000 3921AI-2CF-33NZ125.000000 5730-1SF ASV-25.000MHZ-ECS-50-T EC3620ETTS-24.000M TR EC3925ETTTS-100.000M TR SIT1602BC-83-33E-10.000000Y 8003AI-12-33S-40.00000Y 1602BI-13-33S-19.200000E 8208AI-2F-18E-25.000000X 8208AI-8F-33E-66.666666X NX7031E0125.000000 SiT1602BI-23-33E-25.000000G SiT1602BI-23-18E-24.000000G SiT1602BC-13-33E-50.000000E NX51500001 NX71C50003 KN3270029 SQPCIE100 SiT1602BI-32-33E-50.000000X IC Socket for 2520 case SiT1602BI-22-33E-25.000000E SiT1602BI-12-33E-48.000000E IC Socket for 5032 case CCHD-575-25-24.000 AX5DBF1-250.0000C AX5PAF1-250.0000C AX5PBF1-250.0000C AX5PAF1-266.0000C AX5PBF1-266.0000C