

TF206/TF308 Series

Φ2.0 x 6.0 mm | Φ3.0 x 8.0 mm
TUNING FORK Crystal

TF : TUNING FORK Crystal

206/308 : Φ2.0 x 6.0 mm / Φ3.0 x 8.0 mm

Feature

- Miniature Cylindrical Tuning Fork Crystals
- Package Size: Φ2.0 x 6.0 mm/Φ3.0 x 8.0 mm
- Low Aging, Low Power Consumption, High Shock
- RoHS Compliant / Pb Free

Applications

- Real Time Clock
- Consumer Devices
- Portable Electronics
- Time Display Devices



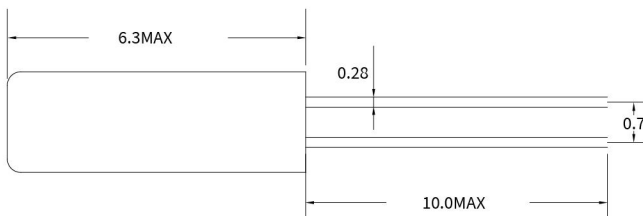
Electrical Specifications

Item	Symb.	Electrical spec.	Notes
Nominal Frequency	Freq.	32.768KHz	
Operating Temperature	T _{use}	-10°C~+60°C/-20°C~+70°C	
Storage Temperature Range	T _{stg}	-40°C~+85°C	
Oscillation Mode		Fundamental	
Frequency Tolerance	f _{tol}	±10ppm / ±20ppm	at 25°C±3°C
Turnover Temperature	T _i	+25°C±5°C	
Parabolic curvature constant	B	-0.042ppm/(Δ°C) ² max.	Over Operating Temp. Range (Reference 25°C)
Drive Level	DL	1 μW Max.	
Load Capacitance	CL	6pF;7pF;9pF;12.5pF	
Effective Resistance	RR	30kΩ max.	
Aging	f _{age}	±3 ppm Max.	1st.Year at 25°C

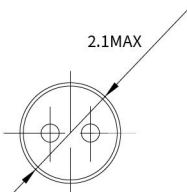
Dimensions (UNIT:mm)

TF206 Series

• SIDE VIEW



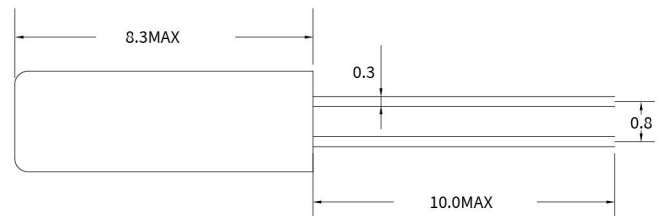
• BOTTOM VIEW



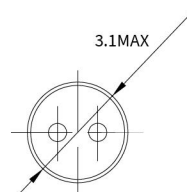
Dimensions (UNIT:mm)

TF308 Series

• SIDE VIEW



• BOTTOM VIEW



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ø2.0 x 6.0 mm | ø3.0 x 8.0 mm
TUNING FORK Crystal

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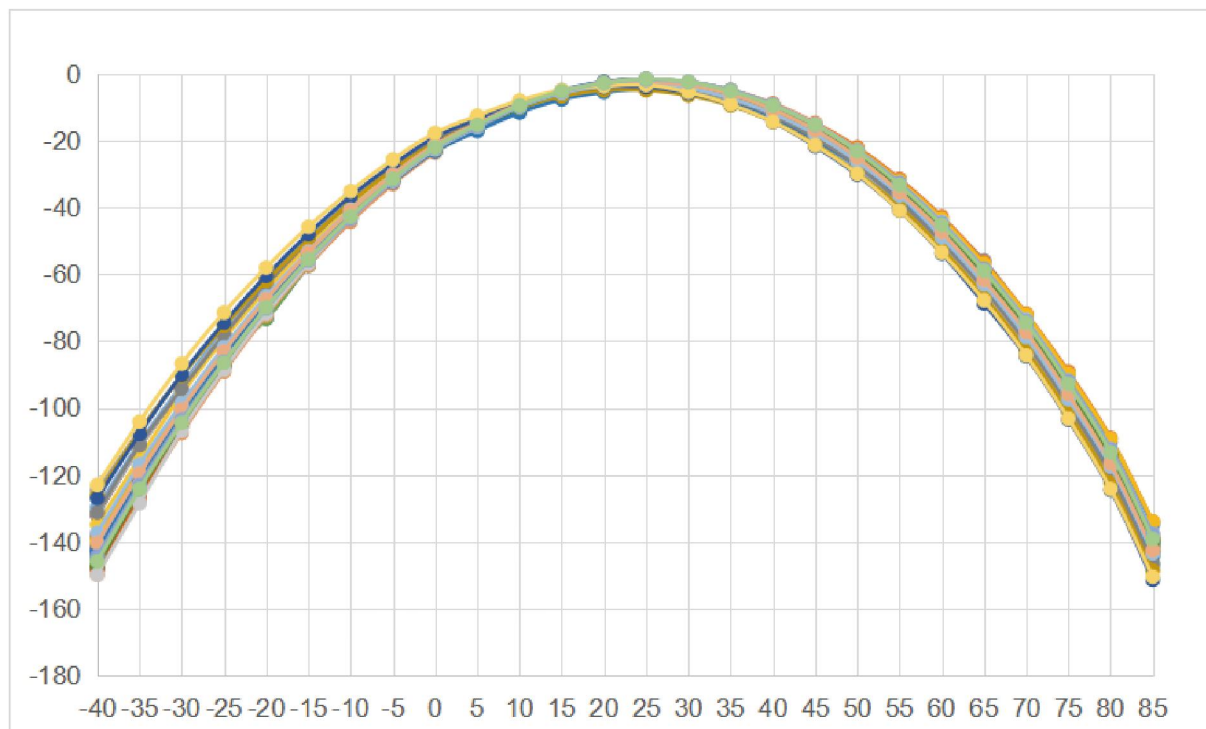
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Options and Part Identification : Example SXDB32.768KA20E

Company	Ceramic Package	Frequency Code [KHZ]	Load Capacitance	Frequency Tolerance	Operating Temperature
SX	DB	32.768K	A	20	E
CodeCompany SXSCTF	CodeCeramic Package DBø2.0×6.0 mm DCø3.0×8.0 mm	Frequency 32.768K	CodeLoad Capacitance A12.5pF G9pF C7pF D6pF	CodeFrequency Tolerance 10±10ppm 20±20ppm	CodeOperating Temperature C-10°C~+60°C E-20°C~+70°C

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

Frequency Temperature Characteristics



Marking Information



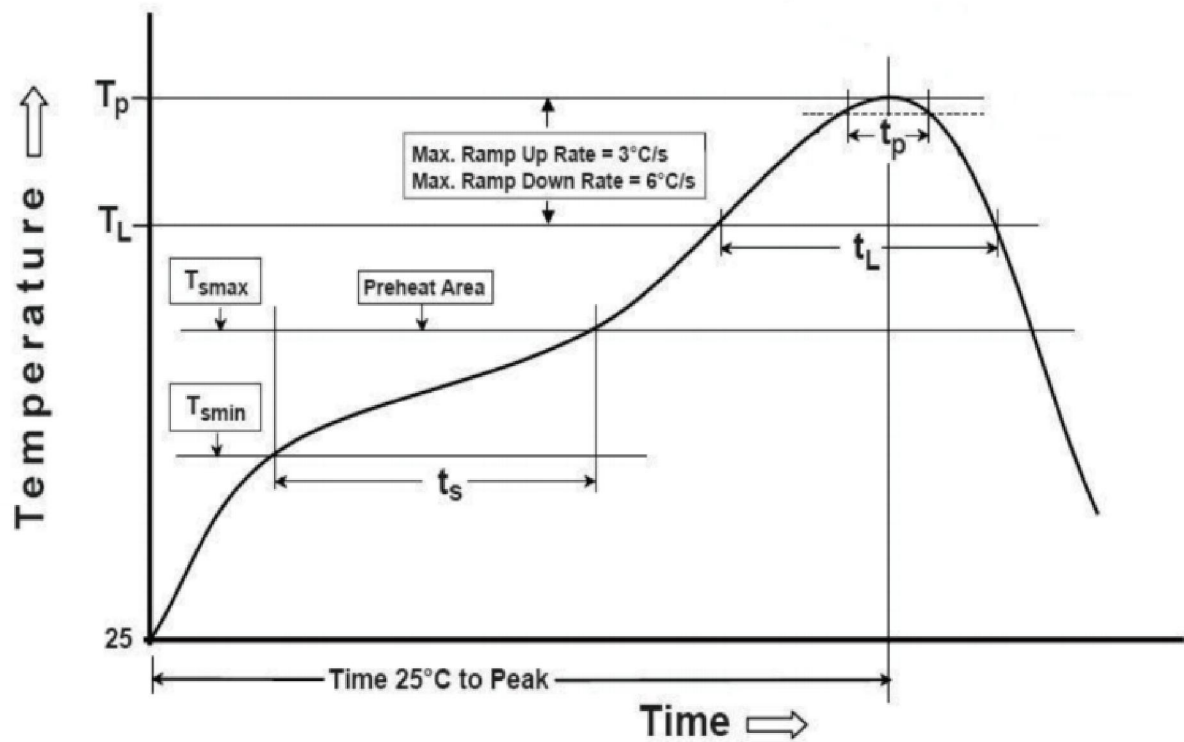
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Suggested Reflow Profile



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.
Suggest reflow times	2 Times max.	

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Packaging Information

● TF308

T=Bag and box (1,000pcs/bag)



T=Bag and box (5,000pcs/box)



● TF206

T=Bag and box (1,000pcs/bag)



T=Bag and box (10,000pcs/box)

