

承 认 书

SPECIFICATION FOR APPROVAL

客户名称 Customer Name:	立创商城
供应商物料名称 Part Name:	石英晶体振荡器
产品描述 Description:	SMD3225 32.768KHz/3.3V/Low power
供应商物料料号 Part NO.:	S3D32.768KLB20F30T
供应商名称 Supplier Name :	深圳市星通时频电子有限公司

PLEASE CONFIRM OUR SPECIFICATION. 敬请确认规格书之内容。

CUSTOMER APPROVAL 客户审批		
物料代号 PART NO. _____		
使用于机型 USED IN MODEL: _____		
工程部	品质部	采购部

(敬请确认后返回一份, 谢谢!)

SUPPLIER APPROVAL 供应商审批		
DGN.制表人	CKD. 校对	APPD. 审核、签章
吴丽红	李霞	胡华才

地址: 深圳市南山区龙珠四路方大城T2栋10楼

Add: 10 / F, Building T2, Fangdacheng, Longzhu 4th Road, Nanshan District, Shenzhen, China.

Website: www.sctf-crystal.com

Email: info@sctf-crystal.com

TEL: 0755-86097430

FAX: 0755-86097259

Page:1



RoHS Compliant

Revision Record				
Rev.	Revise page 修订页	Revise contents 修订内容	Rev. Date 修订日期	Reviser 修订人
A02	N/A	Initial released.	2013/1/1	Martin.Hu
A03	N/A	The version is upgraded and the content remains unchanged.	2018/2/25	Martin.Hu
B01	Page2	The version is upgraded and add revision record page.	2021/2/24	Martin.Hu

SHENZHEN SCTF ELECTRONICS CO. , LTD		
DATE	Specification of quartz crystal oscillator 石英晶体振荡器规格书	Page:
2022/4/24	P/N: S3D32.768KLB20F30T Spec.NO.: SCTF2022LC306	2

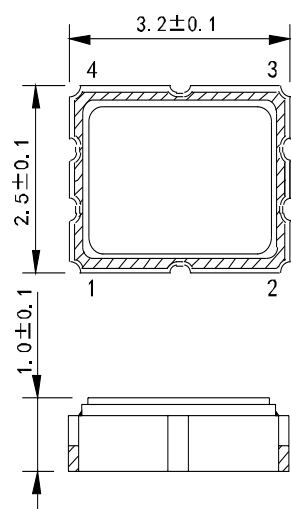
■ Electrical Specification 电气参数

N0.	Item	Electrical Spec.	Notes
1	Holder Type 封装	SMD3225	
2	Nominal Frequency 标称频率	32.768K Hz	
3	Frequency stability 常温频差	±20PPM	at 25℃±2℃
4	Temperature Drift 温度频差	±30PPM	at -40~85℃
5	Operating voltage 工作电压	3.3V	±10% max.
6	Output 输出模式	CMOS	
7	Output load condition 负载	15pF	
8	Current consumption 消耗电流	7.2 uA max.	No load condition,Vdd=3.3V.
		6.5 uA max.	No load condition,Vdd=1.8V.
9	Operating temperature range 工作温度范围	-40~85℃	
10	Storage Temperature Range 存储温度范围	-55~125℃	
11	Duty Cycle 占空比	45%-55%	
12	Rise / Fall Time 上升/下降沿时间	25 nS max.	
13	High output voltage 高电平	0.9Vdd min.	
14	Low output voltage 低电平	0.1Vdd max.	
15	Start-up Time 起振时间	20mS max.	To 90% of Final Amplitude
16	Enable Voltage High (Logic 1) 使能高电平	70%Vdd min.	Output will be enable if OE is Logic 1 or open ; Output will be disable if OE is Logic 0. 输出使能OE是高电平1或者悬空，频率输出；输出使能OE是低电平0，则无频率输出。
17	Enable Voltage Low (Logic 0) 使能低电平	30%Vdd max.	
18	Enable Delay Time 使能延迟	20 mS max.	
19	Aging 老化	±3ppm	1st. Year at 25℃

SHENZHEN SCTF ELECTRONICS CO. , LTD

DATE	Specification of quartz crystal oscillator 石英晶体振荡器规格书	Page:
2022/4/24	P/N: S3D32.768KLB20F30T Spec.NO.: SCTF2022LC306	3

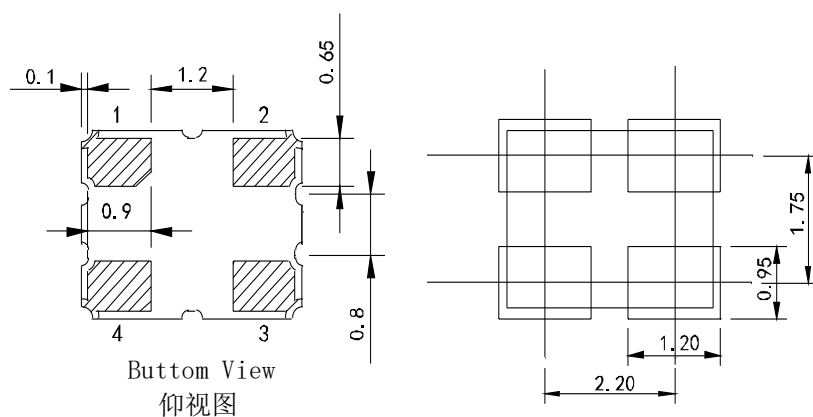
■ DIMENSIONS 产品尺寸



Units (单位): mm(毫米)

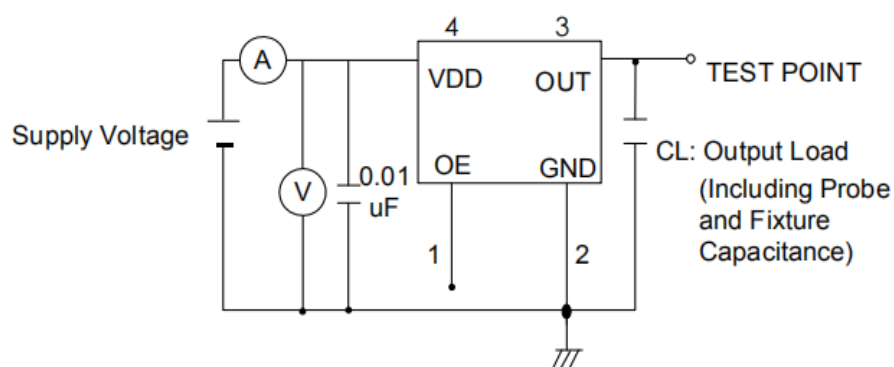
Pad Functions:

1. ENABLE CONTROL
2. GND
3. OUT PUT
4. VDD



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

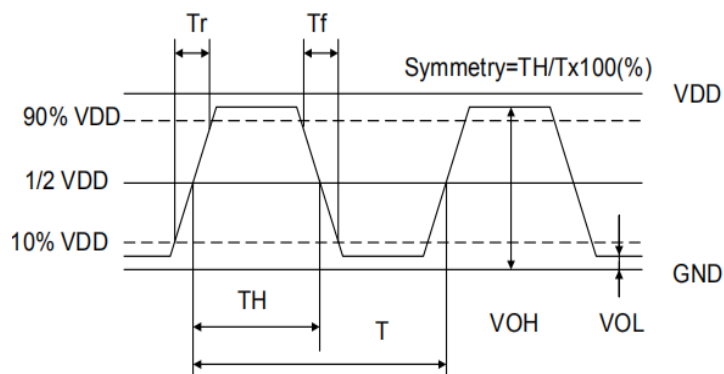
■ TESTING CIRCUIT 测试电路



SHENZHEN SCTF ELECTRONICS CO. , LTD

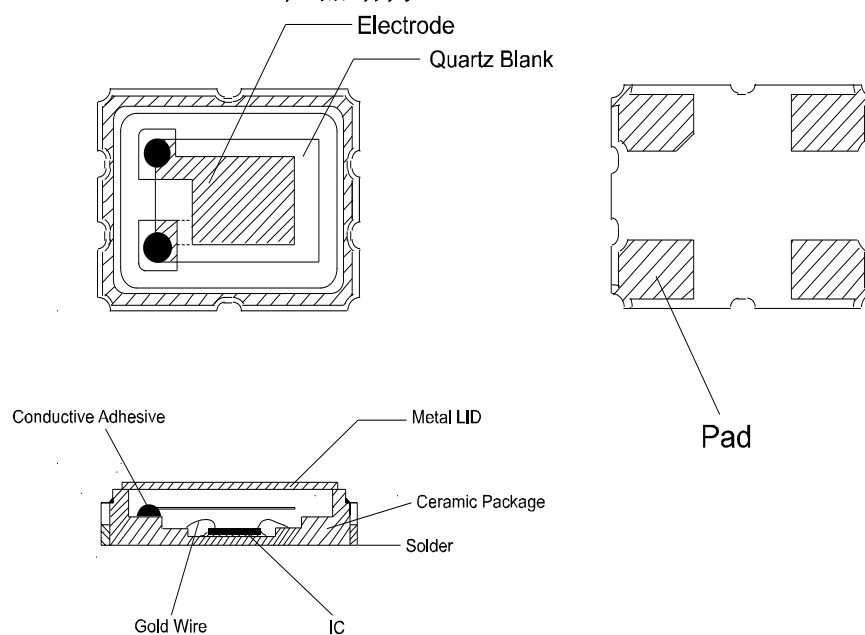
DATE	Specification of quartz crystal oscillator 石英晶体振荡器规格书	Page:
2022/4/24	P/N: S3D32.768KLB20F30T Spec.NO.: SCTF2022LC306	4

■ WAVEFORM CONDITIONS 输出波形

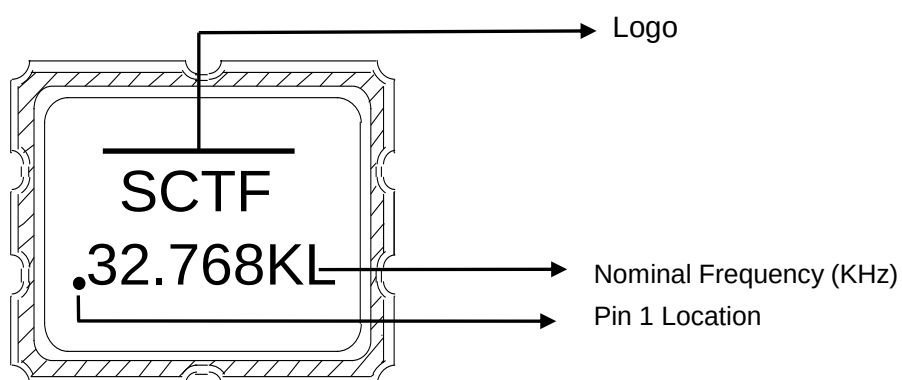


Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.

■ Product Structure 产品结构



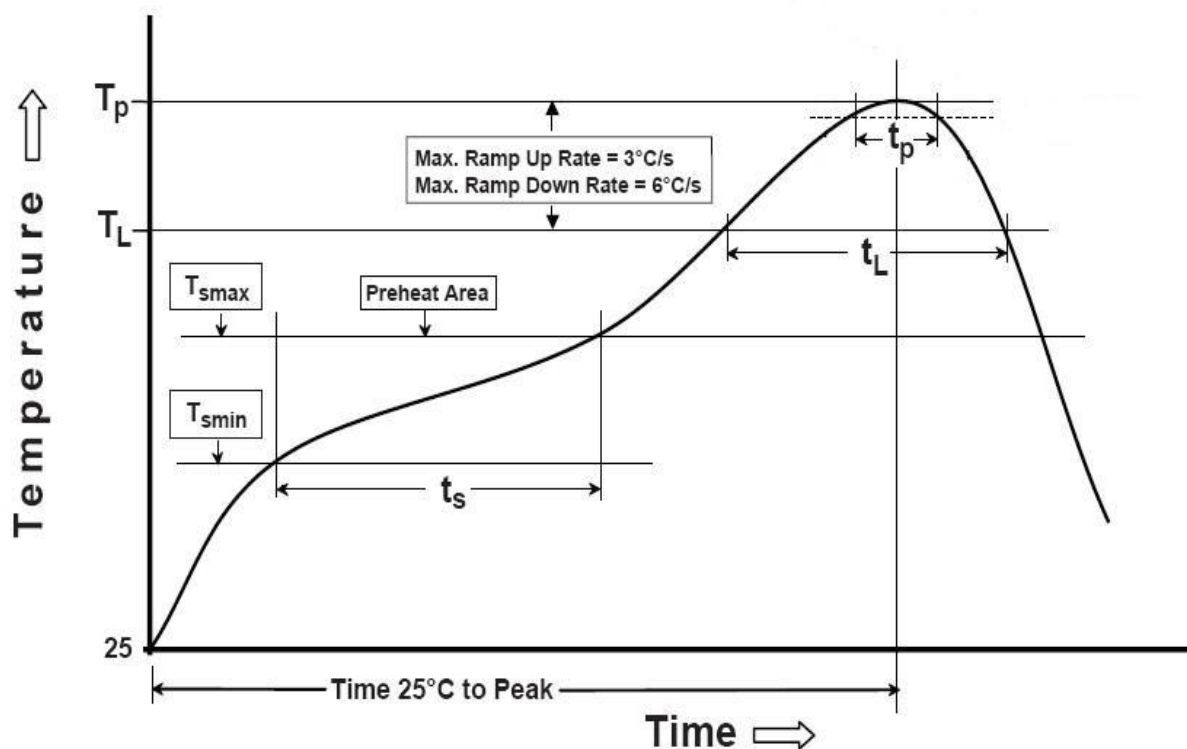
■ Marking 印字



SHENZHEN SCTF ELECTRONICS CO. , LTD		
DATE	Specification of quartz crystal oscillator 石英晶体振荡器规格书	Page:
2022/4/24	P/N: S3D32.768KLB20F30T Spec.NO.: SCTF2022LC306	5

REFLOW PROFILES 回流焊条件

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat/Soak		
● Temperature Min (Ts min)	100 °C	150 °C
● Temperature Max (Ts max)	150 °C	200 °C
● Time (Ts min to Ts max)	60-120 seconds	60-120 seconds
Ramp-up rate (TL to Tp)	3 °C/second max.	3 °C/second max.
Time maintained above		
● Liquidous temperature (TL)	183 °C	217 °C
● Time (tL) maintained above TL	60-150 seconds	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	3 Times max.	



SHENZHEN SCTF ELECTRONICS CO., LTD

DATE	Specification of quartz crystal oscillator 石英晶体振荡器规格书	Page:
2022/4/24	P/N: S3D32.768KLB20F30T Spec.NO.: SCTF2022LC306	6

■ RELIABILITY SPECIFICATION可靠性参数

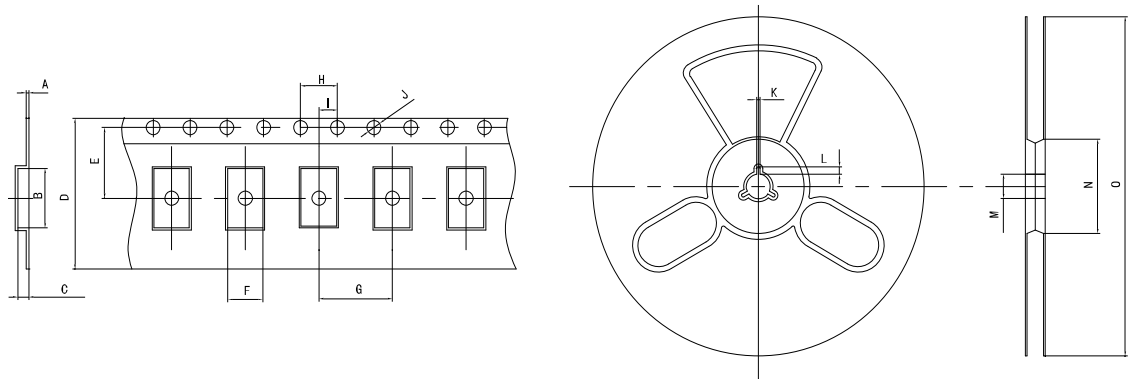
序号 NO.	项目 ITEM	条件 CONDITIONS	合格标准 BASIS OF VERDICT
1	跌落 DROP	100cm高处自由跌落到3cm厚木板上,3次 High:100cm;Thickness:3cm;3 times.	$\Delta FL \leq \pm 5 \text{ppm}$
2	振动 VIBRATION	频率 Frequency:10~57.7Hz;幅度 Amplitude: $\pm 0.75 \text{mm}$ 频率Frequency:57.7Hz~500Hz;加速度幅度acceleration rate:98m/s ² 周期 Cycle time:10-500-10Hz: 15min 振动方向 Direction:X,Y, Z 振动时间 Duration: 每个方向2小时 2 h/direction.	$\Delta FL \leq \pm 5 \text{ppm}$
3	温度变化 TEMPERATURE SHOCK	-40℃ $\pm 2^\circ\text{C}$ (30min) $\longleftrightarrow$ 85℃ $\pm 2^\circ\text{C}$ (30min);循环10次 -40℃ $\pm 2^\circ\text{C}$ (30min) $\longleftrightarrow$ 85℃ $\pm 2^\circ\text{C}$ (30min);For 10 cycles	$\Delta FL \leq \pm 5 \text{ppm}$
4	湿热 HUMIDITY	温度:40℃ $\pm 2^\circ\text{C}$;湿度90-95%;时间:96小时 Temp:40℃ $\pm 2^\circ\text{C}$;Humidity:90-95%;Times:96h	$\Delta FL \leq \pm 5 \text{ppm}$
5	低温 COLD RESISTANCE	温度:-40℃ $\pm 2^\circ\text{C}$;时间:96小时 Temp:-40℃ $\pm 2^\circ\text{C}$;Times:96h	$\Delta FL \leq \pm 5 \text{ppm}$
6	高温1 HEAT RESISTANCE 1	温度:100℃ $\pm 2^\circ\text{C}$;时间:96小时 Temp:100℃ $\pm 2^\circ\text{C}$;Times:96h	$\Delta FL \leq \pm 5 \text{ppm}$
7	高温2 HEAT RESISTANCE 2	温度:155℃ $\pm 2^\circ\text{C}$;时间:2小时 Temp:155℃ $\pm 2^\circ\text{C}$;Times:2h	$\Delta FL \leq \pm 5 \text{ppm}$
8	高温3 HEAT RESISTANCE 3	温度:85℃ $\pm 2^\circ\text{C}$;电压:3.3V/5.0V;时间:96小时 Temp:85℃ $\pm 2^\circ\text{C}$;Voltage:3.3V/5.0V;Times:96h	$\Delta FL \leq \pm 5 \text{ppm}$
9	回流焊 REFLOW	150℃ $\pm 5^\circ\text{C}$ 保持120s后升到270℃ $\pm 5^\circ\text{C}$ 保持10s, 升温 and 保温时间小于200s, 常温放置1~2h后测定 Keep 150 °C $\pm$ 5 °C 120s and then rose to 270 °C $\pm$ 5 °C for 10s, warming and holding time is less than the 200s, placed at room temperature 1 ~ 2h after test	$\Delta FL \leq \pm 5 \text{ppm}$
10	盐雾 SALT SPRAY	盐雾浓度:5%;温度:35℃;时间:24小时 Salt density:5%;Temp:35℃;Times:24h	目测无明显腐蚀现象 Visual no significant corrosion.
11	老化 AGING	温度:85℃;时间:30天 Temp:85℃;Times:30days	$\Delta FL \leq \pm 5 \text{ppm}$
12	气密性 LEAKAGE	氦气(0.6~0.65MPa):10分钟 He(0.6~0.65MPa):10min	$\leq 3 \times 10^{-9} \text{Pa} \cdot \text{m}^3/\text{s}$
13	焊接 SOLDER	温度:260℃ $\pm 5^\circ\text{C}$ Temp:260℃ $\pm 5^\circ\text{C}$	浸锡率大于90% Soldering tin rate greater than 90%

SHENZHEN SCTF ELECTRONICS CO. , LTD

DATE	Specification of quartz crystal oscillator 石英晶体振荡器规格书	Page:
2022/4/24	P/N: S3D32.768KLB20F30T Spec.NO.: SCTF2022LC306	7

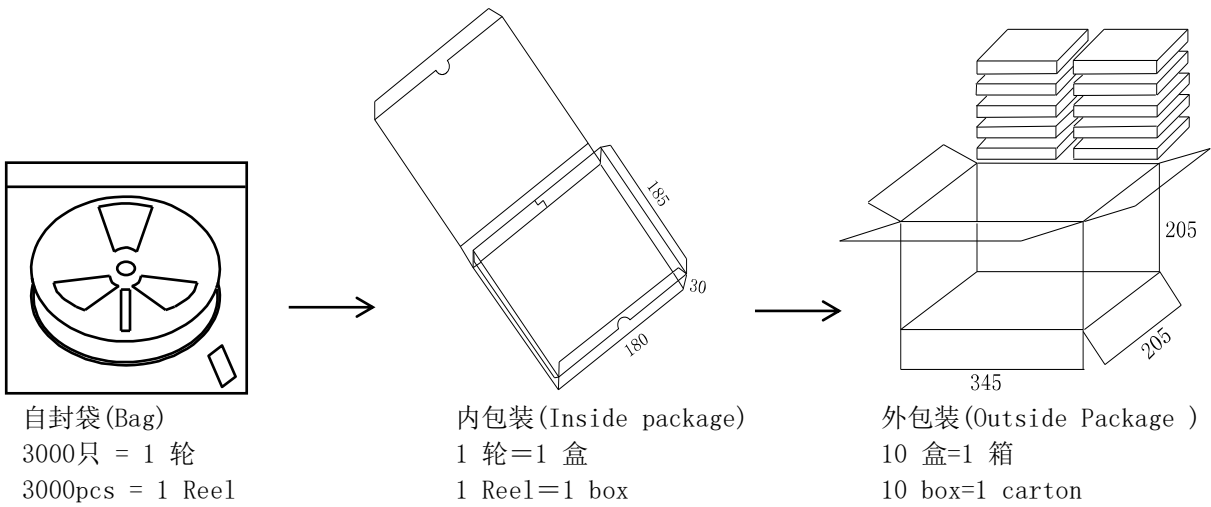
Taping Specifications编带规格

UNIT (单位) : mm (毫米)



TEYE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
3.2×2.5 SMD	0.25	3.60	1.30	8.00	3.50	2.90	4.00	4.00	2.00	1.50	2.00	4.00	13.00	60.00	180.00

Packaging specifications包装规格



SHENZHEN SCTF ELECTRONICS CO. , LTD		
DATE	Specification of quartz crystal oscillator 石英晶体振荡器规格书	Page:
2022/4/24	P/N: S3D32.768KLB20F30T Spec.NO.: SCTF2022LC306	8

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](#) [ASV-20.000MHZ-LR-T](#) [MXO45HS-2C-66.6666MHZ](#) [SiT1602BI-22-33E-50.000000E](#)
[SiT8209AI-32-33E-125.000000](#) [SIT8918AA-11-33S-50.000000G](#) [SM4420TEV-40.0M-T1K](#) [F335-24](#) [F335-40](#) [F535L-10](#) [F535L-12](#) [F535L-](#)
[16](#) [F535L-24](#) [F535L-27](#) [F535L-48](#) [PE7744DW-100.0M](#) [ASF1-3.686MHZ-N-K-S](#) [ASV-4.000MHZ-LCS-T](#) [XLH735025.000JU4I8](#)
[XLP725125.000JU6I8](#) [XO57CTECNA3M6864](#) [ECS-2100A-147.4](#) [601251](#) [EP16E7E2H26.000MTR](#) [SiT8503AI-18-33E-0.200000X](#)
[SIT8918AA-11-33S-16.000000G](#) [XO37CTECNA20M](#) [XO3003](#) [9120AC-2D2-33E212.500000](#) [9102AI-243N25E100.00000](#) [8208AC-82-18E-](#)
[25.00000](#) [ASDK2-32.768KHZ-LR-T3](#) [8008AI-72-XXE-24.545454E](#) [8004AC-13-33E-133.33000X](#) [AS-4.9152-16-SMD-TR](#) [ASFL1-](#)
[48.000MHZ-LC-T](#) [632L3I004M00000](#) [SIT8920AM-31-33E-25.0000](#) [DSC1028DI2-019.2000](#) [9121AC-2C3-25E100.00000](#) [9102AI-](#)
[233N33E100.00000X](#) [9102AI-233N25E200.00000](#) [9102AI-232H25S125.00000](#) [9102AI-133N25E200.00000](#) [9102AC-283N25E200.00000](#)
[9001AC-33-33E1-30.000](#) [3921AI-2CF-33NZ125.000000](#)