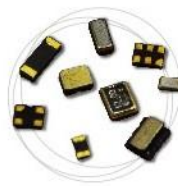
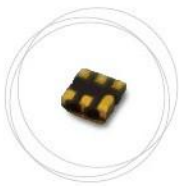




# Products Lineup



Your Best Partner for Frequency Devices  
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## ▶ GPS SAW

GPS

GLONASS

GALILEO

BEIDOU

P/N	Frequency (MHz)	Insertion Loss (dB)	Band Width (MHz)	Size (mm)	Note
TA1804A	1582.469	1.1	46.834	1.1X0.9	
TA1954A (GPS+GLONASS+COMPASS)	1582.47	1.2	46.84	1.1X0.9	
TA1425A (GPS band)	1574.42	0.8	2	1.4x1.1	
TA0757B (GPS band)	1575.42	0.9	2	1.4x1.1	
TA1343A (GPS+GLONASS+GALILEO+BEIDOU)	1583	1.2	46.79	1.4x1.1	
TA1343B (GPS+GLONASS+GALILEO+BEIDOU)	1583	1.2	46.79	1.4x1.1	*AEC-Q200
TA1661A (GPS+GLONASS+GALILEO+BEIDOU)	1583	1.8	46.79	1.4x1.1	*AEC-Q200
TA1267A (GPS+GLONASS)	1588.655	1.25	34.47	1.4x1.1	
TA1267E (GPS+GLONASS)	1588.655	1.25	34.47	1.4x1.1	*AEC-Q200
TA1901A	1587.5	2	57	2.0X1.6	*AEC-Q200
TA1745A	1583	1.8	46.79	2.0X1.6	*AEC-Q200
TA1658A (GNSS)	1582.4	1.7	46.61	3.0X3.0	*AEC-Q200
TA1925A (GPS+GLONASS L2)	1234.4	3.3	45	3.0X3.0	*AEC-Q200
TA0440A (Car Antenna)	1575.42	2.9	2	3.0X3.0	*AEC-Q200
TA1785A	1583	1.8	46.79	3.0X3.0	*AEC-Q200
TA0676A	1592.5	2.6	43	3.0X3.0	*AEC-Q200
TA1442A (BEIDOU)	2492	1.55	5	3.0X3.0	*AEC-Q200
TA1924A (GPS L5+GLONASS E5)	1191.8	3.5	55	3.8X3.8	*AEC-Q200

## ▶ GPS Front End Module

GPS

GLONASS

GALILEO

BEIDOU

P/N	Frequency (MHz)	Insertion Loss (dB)	Band Width (MHz)	Size (mm)	Note
TN0081A (GPS+GLONASS)	1575~1606	1.65	18.5	2.5X2.5H:0.535	*AEC-Q100
TN0089A (GPS+GLONASS+GALILEO+BEIDOU)	1575 1597-1606 1559-1591	1.5	15.5	1.5x1.1H:0.39	*AEC-Q100

## ▶ GPS Xtal

GPS

GLONASS

GALILEO

BEIDOU

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TZ3120A	32.768KHz	9	±20	1.6x1.0	
TZ3108A	32.768KHz	12.5	±20	1.6x1.0	
TZ2528A	32.768KHz	12.5	±20	2.0x1.2	
TZ1510C	32.768KHz	9	±20	3.2x1.5	*AEC-Q200
TZ1006A	32.768KHz	12.5	±20	3.2x1.5	
TZ2754C	32.768KHz	12.5	±20	3.2x1.5	*AEC-Q200
TZ1628A	26	19	±7	3.2x2.5	
TZ1628C	26	19	±7	3.2x2.5	*AEC-Q200

## ▶ GPS TCXO/XO

GPS

GLONASS

GALILEO

BEIDOU

P/N	Frequency (MHz)	Voltage (V)	Tolerance (ppm)	Size (mm)	Note
TX0628C	19.2	3.3	±0.5~±7.5	2.0x1.6	*wide temp range to +105°C
TX0408C	26	2.85	±0.5	2.0x1.6	
TX0544B	38.4	1.8	±0.5	2.0x1.6	
TX0678B	48	1.8~3.3	±0.5~±7.5	2.0x1.6	*wide temp range to +105°C
TX0360A	16.367667	2.85	±0.5	2.5x2.0	
TX0358A	16.368	1.8	±0.5	2.5x2.0	
TX0590B	16.369	1.7~3.3	±2	2.5x2.0	
TX0578C	26	1.8	±0.5	2.5x2.0	
TX0395B	26	2.8	±0.5	2.5x2.0	
TX0486A	26	2.8	±0.5	2.5x2.0	
TX0617B	26	2.8	±0.5	2.5x2.0	
TX0275A	16.368	2.85	±0.5	3.2x2.5	
TX0203A	26	2.775	±0.5	3.2x2.5	

## ▶ WIFI SAW

WIFI

Bluetooth

P/N	Frequency (MHz)	Insertion Loss (dB)	Band Width (MHz)	Size (mm)	Note
TA2105A	2442	2.5	79	1.1X0.9	*WiFi/LTE co-existence
TA1218A	2436	3	72	1.4x1.1	
TA1834A	2441.75	3	83.5	1.4x1.1	
TA1468A	2441.8	1.6	83.5	1.4x1.1	
TA1869A	2442	1.9	79	1.4x1.1	*WiFi/LTE co-existence
TA1629A	2450	1.6	100	1.4x1.1	
TA0222A	2442	1.9	55	3.0x3.0	*AEC-Q200
TA0223A	2441.8	2.1	83.5	3.0x3.1	*AEC-Q200

## ▶ WIFI TCXO/XO

WIFI

Bluetooth

P/N	Frequency (MHz)	Voltage (V)	Tolerance (ppm)	Size (mm)	Note
TW0523A	24	1.8	±25	2.0x1.6	
TW0296D	26	1.8	±10	2.5x2.0	*low phase noise
TW0511A	80	3.3	±20	2.5x2.0	
TW0517A	37.4	1.8	±50	2.5x2.0	
TW0473C	40	2.5	±10	3.2x2.5	*low phase noise
TW0521A	25	3.3	±50	7.0x5.0	*EMI reduction/Spread Spectrum
TX0439C	24	1.68~3.0	±2	3.2x2.5	
TX0546C	26	2.8	±2	2.0x1.6	
TX0617D	26	2.3	±0.5	2.5x2.0	
TX0341E	26	2	±2	3.2x2.5	
TX0359B	40	2.5	±8	3.2x2.5	*CMOS

## ► WIFI Xtal

WIFI

Bluetooth

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TZ3023A	24	7	±10	1.6x1.2	
TZ3126A	26	7	±5	1.6x1.2	
TZ1987A	37.4	16	±10	1.6x1.2	
TZ2936A	48	9	±15	1.6x1.2	
TZ1325D	26	8	±10	2.0x1.6	
TZ2947A	26	10.5	±7	2.0x1.6	
TZ2901B	37.4	8	±10	2.0x1.6	
TZ2323C	48	7	±7	2.0x1.6	
TZ2980A	24	15	±10	2.5x2.0	
TZ2300A	26	11.5	±7	2.5x2.0	
TZ3048B	26	9	±50	2.5x2.0	
TZ0661E	26	9	±10	2.5x2.0	
TZ1478A	40	10.5	±10	2.5x2.0	
TZ0977B	40	15	±10	2.5x2.0	
TZ2650E	40	12	±5	2.5x2.0	
TZ2968C	40	11.5	±7	2.5x2.0	*wide temp range to +105°C
TZ0502D	20	18	±10	3.2x2.5	
TZ2102A	26	13.5	±10	3.2x2.5	
TZ1421A	40	15	±10	3.2x2.5	
TZ0475B	40	15	±10	3.2x2.5	
TZ2855A	40	10.5	±7	3.2x2.5	
TZ3075A	40	12	±10	3.2x2.5	
TZ2746A	40	11.5	±7	3.2x2.5	
TZ1596E	40	10.5	±10	3.2x2.5	*AEC-Q200
TZ2145C	52	12	±5	3.2x2.5	

## ► Combo Chip Xtal

Combo Chip

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TZ2813B	32	8	±10	1.6x1.2	
TZ1987A	37.4	16	±10	1.6x1.2	
TZ2593C	26	16	±8	2.0x1.6	
TZ2206B	37.4	10	±10	2.0x1.6	
TZ1188A	38.4	8.3	±10	2.0x1.6	
TZ2323A	48	7	±10	2.0x1.6	
TZ1778B	19.2	7	±10	2.5x2.0	
TZ2300C	26	11.5	±10	2.5x2.0	
TZ2099A	37.4	10	±10	2.5x2.0	
TZ2322A	48	7	±10	2.5x2.0	
TZ1387A	26	11.2	±10	3.2x2.5	
TZ1462E	38.4	10	±10	3.2x2.5	

## ▶ Combo Chip TCXO/XO

Combo  
Chip

P/N	Frequency (MHz)	Voltage (V)	Tolerance (ppm)	Size (mm)	Note
TX0659C	37.4	1.8~3.6	±2	2.0x1.6	
TX0691A	37.4	3.3	±0.5~±7.5	2.0x1.6	*AEC-Q200 *Wide temp range to +105°C
TW0324C	48	1.8	±10	2.5x2.0	
TX0359B	40	2.5	±8	3.2x2.5	*CMOS

## ▶ Bluetooth Xtal

Bluetooth

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TZ3044A	24	10	±10	1.6x1.2	
TZ1845A	26	9	±10	1.6x1.2	
TZ3266A	38.4	10	±10	1.6x1.2	
TZ3021A	16	6	±10	2.0x1.6	
TZ2486A	16	8	±10	2.0x1.6	*low profile
TZ1618C	26	9	±10	2.0x1.6	
TZ0661B	26	9	±10	2.0x1.6	
TZ1325D	26	8	±10	2.0x1.6	
TZ1670D	16	8	±10	2.5x2.0	
TZ2779C	26	10	±10	2.5x2.0	
TZ2701A	32	12	±10	2.5x2.0	
TZ2099E	37.4	10	±10	2.5x2.0	*AEC-Q200
TZ1185A	16	7.1	±10	3.2x2.5	
TZ1402A	26	10	±10	3.2x2.5	

## ▶ Smart Meter SAW

IoT

Smart  
Metering

Alarm &  
Security

Medical

P/N	Frequency (MHz)	Insertion Loss (dB)	Band Width (MHz)	Size (mm)	Note
TA2093A	869	3	2	1.4x1.1	
TA1423A	915	1.9	26	1.4x1.1	
TA1766A	925.2	2.5	5.8	1.4x1.1	
TA1102A	915	2	26	2.0X1.6	*AEC-Q200
TA0657A	315	1.5	0.6	3.0X3.0	*AEC-Q200
TA1564A	315	2.1	0.36	3.0X3.0	*TPMS
TA0944A	433.92	1.6	1.6	3.0X3.0	*AEC-Q200
TA1565A	433.92	2.4	0.3	3.0X3.0	*TPMS
TA0801A	866.5	2.3	7	3.0x3.0	*AEC-Q200
TA0547A	867.5	1.8	-	3.0x3.0	
TA0659A	868.3	2.9	1.5	3.0x3.0	*AEC-Q200
TA1900A	868.3	3	1.5	3.0x3.0	
TA1404A	869	2.3	2	3.0x3.0	*AEC-Q200
TA1457A	869.6	2.4	1	3.0x3.0	*AEC-Q200
TA0281A	915	2.2	26	3.0x3.0	*AEC-Q200
TA1561A	915	1.9	-	3.0x3.0	
TA0581B	2345	2.8	90	3.0x3.0	
TA0223A	2441.8	2.1	83.5	3.0x3.0	*AEC-Q200
TA0222A	2442	1.9	55	3.0x3.0	*AEC-Q200
TA0437A	169	2	6	5.0X5.0	*AEC-Q200

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TZ3108A	32.768kHz	20	±12.5	1.6x1.0	
TZ3158B	32.768kHz	20	±12.5	2.0x1.2	
TZ1006A	32.768kHz	12.5	±20	3.2x1.5	
TZ2754B	32.768kHz	10	±12.5	3.2x1.5	
TZ2935A	24	15	±9	1.6x1.2	
TZ3023A	24	7	±10	1.6x1.2	
TZ3072A	25.228125	6	±10	1.6x1.2	
TZ3126A	26	7	±5	1.6x1.2	
TZ3127A	26	8	±7	1.6x1.2	
TZ3003A	37.4	7	±20	1.6x1.2	
TZ3206A	40	9	±10	1.6x1.2	
TZ2936A	48	15	±9	1.6x1.2	
TZ3020A	20	7	±20	2.0x1.6	
TZ2490A	25.228125	10	±6	2.0x1.6	
TZ2155B	32	10	±10	2.0x1.6	
TZ2205D	38.4	10	±10	2.0x1.6	
TZ2205E	38.4	10	±10	2.0x1.6	*wide temp range to +125°C
TZ1269C	40	9	±10	2.0x1.6	
TZ1452D	40	15	±10	2.0x1.6	
TZ2762D	40	12	±30	2.0x1.6	
TZ1670B	16	8	±10	2.5x2.0	*wide temp range to +125°C
TZ2981E	16	9	±10	2.5x2.0	
TZ2998A	20	7	±20	2.5x2.0	
TZ2277B	24.305	7	±10	2.5x2.0	
TZ0631C	26	10	±10	2.5x2.0	
TZ0661E	26	10	±10	2.5x2.0	
TZ2944A	26	10.5	±7	2.5x2.0	
TZ1430A	30	10	±10	2.5x2.0	
TZ1430D	30	30	±10	2.5x2.0	*wide temp range to +125°C
TZ0909D	38.4	10	±10	2.5x2.0	
TZ0909E	38.4	10	±10	2.5x2.0	*wide temp range to +125°C
TZ0733D	40	9	±10	2.5x2.0	
TZ2650A	40	12	±10	2.5x2.0	
TZ3101A	40	9.6	±7	2.5x2.0	
TZ3141A	40	12	±5	2.5x2.0	
TZ1410A	12.288	9	±20	3.2x2.5	
TZ1917B	12.8	10	±20	3.2x2.5	
TZ2293A	12.8	10	±10	3.2x2.5	
TZ0384C	16	20	±18	3.2x2.5	
TZ1054D	16	8	±10	3.2x2.5	
TZ1275A	16	9	±20	3.2x2.5	
TZ1203B	24	10	±10	3.2x2.5	
TZ2189C	24.305	7	±10	3.2x2.5	
TZ2892B	25	13	±7	3.2x2.5	
TZ0381E	26	9	±10	3.2x2.5	
TZ1387A	26	11.2	±10	3.2x2.5	
TZ0757B	30	10	±10	3.2x2.5	
TZ1615B	32	10	±8	3.2x2.5	
TZ1880D	32	10	±10	3.2x2.5	

## ▶ IOT Xtal

IoT

Smart  
MeteringAlarm &  
Security

Medical

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TZ0308D	40	9	±10	3.2x2.5	
TZ0475B	40	15	±10	3.2x2.5	
TZ1421A	40	15	±10	3.2x2.5	
TZ2746A	40	11.5	±7	3.2x2.5	
TZ2771D	40	12	±10	3.2x2.5	
TZ0614D	10	10	±10	5.0x3.2	
TZ1983A	32	10	±10	HC49-SMD	
TZ2791A	25	13	±7	HC49-US	
TZ1958A	32	10	±10	HC49-US	

## ▶ IOT TCXO/XO

IoT

Smart  
MeteringAlarm &  
Security

Medical

P/N	Frequency (MHz)	Voltage (V)	Tolerance (ppm)	Size (mm)	Note
TX0659A	40	1.8	±0.5	2.0x1.6	
TX0534C	32	1.8	±2	2.5x2.0	
TX0605A	12	3.3	±1.5	3.2x2.5	*CMOS
TX0341E	26	2.85	±2	3.2x2.5	
TX0338E	30	2.85	±2	3.2x2.5	
TX0665B	36	3.3	±2.5	3.2x2.5	*CMOS *Wide temp range to +105°C
TX0618A	32.768kHz	1.8/2.5/3.0/3.3	±1.5	3.2x2.5	
TX0357A	32.768kHz	3.3	±25	3.2x2.5	
TX0601A	32.768kHz	1.8/2.5/3.0/3.3	±1.5	7.0x5.0	
TW0459B	32.768kHz	1.8	±25	2.5x2.0	
TW0459E	32.768kHz	3.3	±20	2.5x2.0	

## ▶ IOT MCF

IoT

Smart  
MeteringAlarm &  
Security

Medical

P/N	Frequency (MHz)	No. of Poles	Insertion Loss (dB)	Rippl	Pass Bands	Stop Bands	Perminal Impedance		
							Ω	pF	cc : pF
TY0160A	21.4	2	3	1	3 ± 3.75	18 ± 15	870	6	
TY0195A	21.4	2	2	1	3 ± 7.5	18 ± 25	1500	2.5	
TY0148A	21.4	3	3	1	3 ± 7.5	23 ± 25	1500	2.5	
TY0190A	21.4	3	3	1	3 ± 10	15 ± 25	850	2	
TY0255A	21.4	4	3	1	3 ± 10	40 ± 25	1800	0.35	5
TY0136A	21.7	2	3	1	3 ± 3.75	20 ± 20	850	6	
TY0150A	21.7	2	1.5	1	3 ± 7.5	15 ± 25	1500	1	
TY0153A	30.72	2	2	1	3 ± 4	40 ± 60	650	4.5	
TY0133A	45	3	3	1	3 ± 7.5	15 ± 25	651	3.5	
TY0187A	45	3	3	1	3 ± 15	20 ± 60	1200	1	
TY0257A	45	4	3	1	3 ± 7.5	30 ± 25	600	2.3	7.5
TY0191F	45.2	4	3	1	3 ± 6	25 ± 22	650	3	9
TY0168A	73.35	3	2	1	3 ± 6.5	8 ± 12.5	1800	-1.6	
TY0147A	76.8	2	3	1	3 ± 4	35 ± 60	1500	-1.4	
TY0184A	109.65	3	2.5	0.7	3 ± 6.5	5.5 ± 12.5	950	-1.4	

2poles 19.05MHz~6.8MHz

3poles 21.4MHz~109.65MHz

4poles 19.665MHz~51.65MHz

## ▶ NFC Xtal

NFC

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TZ2852A	27.12	12	±10	1.6x1.2	
TZ3137A	27.12	8	±10	1.6x1.2	
TZ1897B	27.12	10	±10	2.0x1.6	
TZ2959A	27.12	10	±30	2.0x1.6	
TZ2959A	27.12	10	±30	2.0x1.6	*metal cap structure
TZ1261C	27.12	10	±10	2.5x2.0	
TZ0633A	27.12	10	±10	3.2x2.5	

## ▶ SSD Crystal Xtal

SSD

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TZ3236A	25	6	±10	1.6x1.2	
TZ3206B	40	9	±30	1.6x1.2	
TZ2724D	25	6	±10	2.0x1.6	*metal cap structure
TZ2370B	30	6	±10	2.0x1.6	*metal cap structure
TZ2930B	40	6	±45	2.0x1.6	*metal cap structure

## ▶ TPMS SAW

TPMS

P/N	Frequency (MHz)	Insertion Loss (dB)	Band Width (MHz)	Size (mm)	Note
TA1565A	433.92	2.6	0.3	3.0x3.0	
TA1564A	315	2.4	0.36	3.0x3.0	

## ▶ TPMS Xtal

TPMS

P/N	Frequency (MHz)	Voltage (V)	Tolerance (ppm)	Size (mm)	Application
TZ2205E	38.4	10	±10	2.0x1.6	-40°C +125°C Lighting Control
TZ3035A	24	10	±10	2.5x2.0	-40°C +125°C BT
TZ0909E	38.4	10	±10	2.5x2.0	-40°C +125°C Lighting Control
TZ1054D	16	8	±10	3.2x2.5	-40°C +125°C Zigbee
TZ0447D	16.384	20	±10	3.2x2.5	-40°C +125°C 2.4G
TZ2941A	18.08	8	±10	3.2x2.5	-40°C +125°C TPMS
TZ0604P	20	12	±10	3.2x2.5	-40°C +125°C Wireless Lighting
TZ1203B	24	10	±10	3.2x2.5	-40°C +125°C IoT
TZ3034A	24.576	20	±10	3.2x2.5	-40°C +125°C 2.4G
TZ2798A	25	15	±10	3.2x2.5	-40°C +125°C LNB
TZ0659C	26	8	±10	3.2x2.5	-40°C +125°C TPMS
TZ2591C	32	12	±10	3.2x2.5	-40°C +125°C Zigbee & WiFi
TZ2756A	40	10	±10	3.2x2.5	-40°C +125°C Security
TZ2711A	50	15	±10	3.2x2.5	-40°C +125°C LNB



▶ TPMS Xtal \*operating temperature -40~125°C, AEC-Q200 compliance

TPMS

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Stability (ppm)	Size (mm)
TZ2691D	26	8	±10	±50	2.0x1.6
TZ0825E	32	8	±20	±50	2.5x2.0
TZ2666B	19.6875	12	±10	±60	3.2x2.5
TZ2384B	21.948717	10	±10	±50	3.2x2.5
TZ0659C	26	8	±10	±60	3.2x2.5
TZ1624C	8	10	±10	±50	5.0x3.2
TZ2382A	18.08	12	±30	±80	5.0x3.2

▶ LTE SAW Duplexer

3G LTE Repeater Femtocell Base Station

	P/N	Frequency (MHz)	Insertion Loss (dB)	Band Width (MHz)	Size (mm)
Duplexer	TF0120A(Band 1)	1950/2140	2.4	60	1.8x1.4
	TF0121A(Band 2)	1880/1960	1.9	59.04	1.8x1.4
	TF0135A(Band 3)	1747.5/1842.5	1.7	74.7	1.8x1.4
	TF0123A(Band 5)	836.5/881.5	2.5	25	1.8x1.4
	TF0124A(Band 7)	2535/2655	1.5	70	1.8x1.4
	TF0125A(Band 8)	897.5/942.4	2	30.2	1.8x1.4
	TF0133A(Band 12)	707.5/737.5	1.8	17	1.8x1.4
	TF0136A(Band 25)	1882.5/1962.5	1.9	65	1.8x1.4
	TF0137A(Band 26)	831.5/876.5	2.1	34.52	1.8x1.4
	TF0126A(Band 1)	1950/2140	1.4	60	1.8x1.4
	TF0127A(Band 2)	1880/1960	2.2	60	1.8x1.4
	TF0129A(Band 5)	836.5/881.5	2	25	1.8x1.4
	TF0130A(Band 8)	897.5/942.4	1.65	30.2	1.8x1.4
Single Filter	TA1845D(Band 1 Rx)	2140	1.9	60	1.1X0.9
	TA1815A(Band 1 Tx)	1950	1.8	60	1.1X0.9
	TA1870D(Band 2 Rx)	1960	2.8	60	1.1X0.9
	TA1871A(Band 2 Tx)	1880	1.7	60	1.1X0.9
	TA1843C(Band 3 Rx)	1842.5	2	75	1.1X0.9
	TA1885A(Band 3 Tx)	1747.5	2.1	75	1.1X0.9
	TA1811D(Band 5 Rx)	881.5	1.6	25	1.1X0.9
	TA1692A(Band 5 Tx)	836.5	1.9	25	1.1X0.9
	TA1847D(Band 7 Rx)	2655	2.5	70	1.1X0.9
	TA1886A(Band 7 Tx)	2535	1.7	70	1.1X0.9
	TA1839D(Band 8 Rx)	942.5	2	35	1.1X0.9
	TA1814A(Band 8 Tx)	897.5	2.3	35	1.1X0.9
	TA2062A(Band 13 Rx)	751	1.9	10	1.1X0.9
	TA1813A(Band 13 Tx)	782	1.5	10	1.1X0.9
	TA2041A(Band 20 Rx)	806	2.7	30	1.1X0.9
	TA2042A(Band 20 Tx)	847	2	30	1.1X0.9
	TA1897A(Band 28A Rx)	773	2.1	30	1.1X0.9
	TA1898A(Band 28B Rx)	788	2	30	1.1X0.9
	TA1968A(Band 38 DRX)	2595	1.6	50	1.1X0.9
	TA2018A(Band 39 DRX)	1900	1.4	40	1.1X0.9
	TA1969A(Band 40 DRX)	2350	1.9	100	1.1X0.9
	TA1991A(Band 41 DRX)	2605	3.5	100	1.1X0.9
	TA1965A(Band 38 TRX)	2595	1.6	50	1.1X0.9
TA1966A(Band 40 TRX)	2350	1.9	100	1.1X0.9	
TA1967A(Band 41 TRX)	2602.5	1.8	105	1.1X0.9	

## ► LTE TCXO/VCTCXO/XO

3G

LTE

Repeater

Femtocell

Base Station

P/N	Frequency (MHz)	Load Capacitance (pF)	Tolerance (ppm)	Size (mm)	Note
TX0371B (UMTS)	26	2.8	±2	2.5x2.0	
TX0445B (UMTS)	26	2.85	±2	2.5x2.0	
TX0617D	26	2.8	±1	2.5x2.0	
TX0362A	19.2	3.3	±1.5	3.2x2.5	
TX0315B (UMTS)	26	2.8	±2	3.2x2.5	
TX0305A (Femtocell)	26	3.3	±2	3.2x2.5	
TX0472 (Femtocell)	19.2	3.3	±2	5.0x3.2	
TX0462 (Stratum III)	10	3.3	±1	7.0x5.0	
TW0617D	156.25	2.5	±50	7.0x5.0	*LVPECL
TW0508A	312.5	2.5	±50	7.0x5.0	*LVPECL

## ► High Frequency TCXO/VCTCXO/XO

High Frequency

P/N	Frequency (MHz)	Voltage (V)	Size (mm)	Application	Note
TW0401D	40	2.5	2.5x2.0	Home Theater	*Ultra Low Jitter
TW0511B	80	3.3	2.5x2.0	Home Theater	*Ultra Low Jitter
TW0534F	16	3.3	5.0x3.2	Metering	*EMI Reduction, CMOS
TW0521A	25	3.3	7.0x5.0	Internet	*EMI Reduction, CMOS
TW0274B	40	3.3	7.0x5.0	Sensors for parking meters	*EMI Reduction
TW0495A	125	3.3	7.0x5.0	WIFI	*EMI Reduction
TX0646A	27	3.3	3.2x2.5	Low-end Signal	*Quick Turn TCXO; LVDS
TX0653A	125	3.3	3.2x2.5	RF Converter	*Quick Turn TCXO; LVPECL
TX0655A	400	3.3	3.2x2.5	RF Converter	*Quick Turn TCXO; LVPECL
TX0676F	24	3.3	3.2x2.5	Smart Home	*Quick Turn VCTCXO; CMOS
TX0682A	50	3.3	3.2x2.5	QSFP/SFP	*Quick Turn TCXO; CMOS
TX0682B	50	3.3	3.2x2.5	Cellular Repeater	*Quick Turn VCTCXO; CMOS

## ► Data Center XO VCXO SO

Mobile Backhaul

Mobile access

Data Center

Product	TST P/N	Frequency (MHz)	Output	Package (mm)
SPXO	TW0301A	50	CMOS	2520
	TW0426A	125	CMOS	3225
	TW0399A	156.25	CMOS	5032
VCXO	TX0438A	30.72	CMOS	7050
	TX0444A	122.88	LV-PECL	7050
	TX0582A	61.44	CMOS	7050
SPSO	TS0019A	156.25	CMOS	7050

## ► Instrument XO VCXO SO

Measurement instruments

Product	TST P/N	Frequency (MHz)	Output	Package (mm)
SPXO	TW0451A	12	CMOS	2520
	TW0403A	24	CMOS	2520
	TW0352A	25	CMOS	2520
	TW0543A	48	CMOS	2016
	TW0426A	125	CMOS	3225
VCXO	TX0673A	100	CMOS	7050
	TX0444A	122.88	LV-PECL	7050

## ► Automation XO VCXO SO

Factory Automation

Security

Product	TST P/N	Frequency (MHz)	Output	Package (mm)
SPXO	TW0445A	8	CMOS	2520
	TW0451A	12	CMOS	2520
	TW0288A	13.56	CMOS	3225
	TW0420A	16	CMOS	3225
	TW0420A	16	CMOS	3225
	TW0403A	24	CMOS	2520
	TW0403A	24	CMOS	2520
	TW0374A	27	CMOS	2520
	TW0255A	32	CMOS	3225
	TW0543A	48	CMOS	2016
	TW0543A	48	CMOS	2016
	TW0435A	54	CMOS	2520
	TW0426A	125	CMOS	3225

## ► Broadcasting XO VCXO SO

Broadcasting & Audio

Product	TST P/N	Frequency (MHz)	Output	Package (mm)
SPXO	TW0543A	48	CMOS	2016
	TW0275A	12.288	CMOS	2520
	TW0268A	24.576	CMOS	2520
	TW0451A	12	CMOS	2520
	TW0403A	24	CMOS	2520
	TW0512A	11.2896	CMOS	3225
	TW0415A	22.5792	CMOS	3225
	TW0359A	49.152	CMOS	3225
	TW0283A(100M)	100 to 175	LV-PECL	7050
VCXO	TX0589A	27	CMOS	7050
	TX0147A	54	CMOS	7050
	TX0171A	100 to 700	LV-PECL	7050
SPSO	TS0024A(100M)	100 to 700	LV-PECL / LVDS	7050

## ► LTCC SAW

Wi-Fi

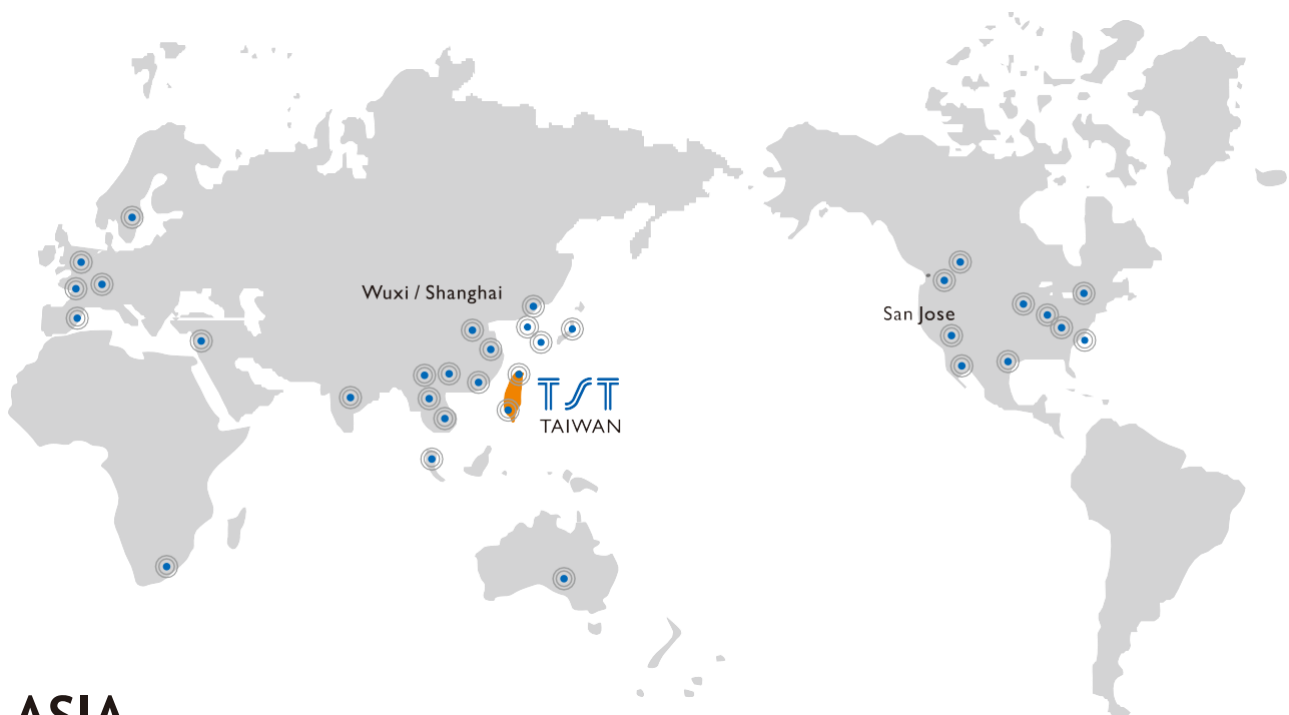
4G LTE

IOT

TST PART NUMBER	CENTER FREQ. (MHz)	BANDWIDTH (MHz)	PACKAGE SIZE (mm)	APPLICATION	NOTE
TL0001A	3550	500	1.6X0.8	WI-FI	
TL0002A	3550	500	2.0X1.25	WI-FI	
TL0003A	2450	300	1.0X0.5	LTE, IOT	
TL0004A	1845	270	1.0X0.5	LTE, IOT	
TL0005A	824	250	1.0X0.5	LTE, IOT	
TL0006A	807	216	1.0X0.5	LTE, IOT	
TL0007A	2247.5	885	1.6X0.8	LTE, IOT	
TL0008A	2002.5	395	1.4X1.1	LTE, IOT	
TL0009A	2450	100	2.0X1.25	Bluetooth, wireless LAN	
TL0010A	2450	100	1.6X0.8	WI-FI	
TL0011A	5425	1050	2.0X1.25	W-LAN	

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