



**THIS IS TO CERTIFY THAT**

**JBG METAFIX**

**IS OUR AUTHORISED DISTRIBUTOR FOR WTL PRODUCT IN FRANCE MARKET. WITH EFFECT FROM JANUARY 1ST, 2019 TO DECEMBER 31ST, 2020.**

**WTL INTERNATIONAL LIMITED**

**AUTHORISED BY**



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# WTL International Limited

## Frequency Oscillator Experts

# WTL Company Profile



## Vision

- The WTL Company will inspire its employees to be the best they can be. We will engage in sustainable practices and anticipate the needs of our customers. We will maximize return to the stockholders while still maintaining high quality in our products.

## Mission

- One Stop Frequency Centre
- Best Quality
- Profitable
- Sustainable
- Health Works
- Continues Improvement  
(People, Material, Quality and Service)

## ◆ WTL Company Profile



WTL INTERNATIONAL LIMITED  
Shenzhen WTL Electronic Technology Co., Ltd

- \* Established: Year 2001
- \* Capital: 80Million
- \* National Key High –Tech Enterprise in Anhui Province

- **AnHui Factory**

- Worker: 175
- Factory SIZE: 6000M<sup>2</sup>
- Production, QA, QC, Warehouse, R&D, Technical, IQC

- **Shen Zhen Office**

- Sales & Marketing & Warehouse

- **Hong Kong Office**

- Financial Control & Global Procurement

# History

**2002年**

**Established production base**  
Established 49s/49U  
production line in October with  
monthly capacity of 800kpcs

**2005年**

Imported production  
line of the Glass series  
expanding monthly  
capacity to 6 m pieces

**2010年**

The factory was moved to Anhui,  
and the monthly capacity  
expanded to 26 million.  
Imported 5 Japanese SMD3225  
automatic lines

**2017年**

**Capacity: 40 million**  
Keep introducing new  
automation  
equipment, increasing  
monthly capacity to 40  
million

**2001年**

Found in Shenzhen and  
set up a factory

**2003年**

ISO9001 Quality system  
certification ISO14001  
Environmental system  
certification

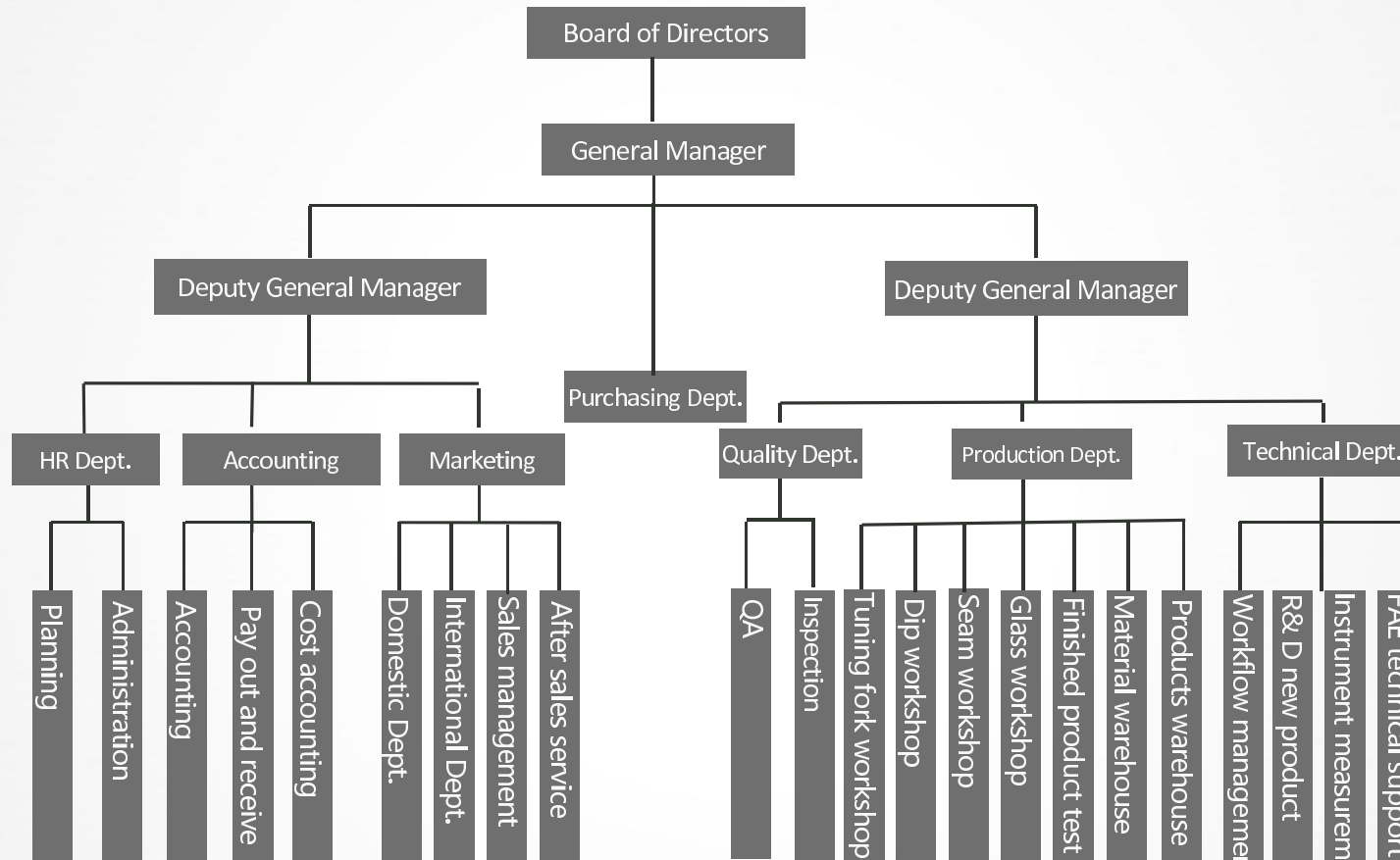
**2007年**

Opened up the international  
market, Successfully imported  
international customers such as  
Jabil, Arrow, and Flex.

**2015年**

Miniaturized mass production for  
2520, continue to maintain  
development direction of  
diversification, miniaturization, high-  
precision

# WTL Structure





Clean room/ 10000



# ◆ WTL Factory





# WTL Company Profile

## Capacity & Material




















Product Category	Monthly Capacity
SMD 2025	2M
<b>SMD 3225</b>	<b>20 M</b>
SMD5032	1 M
SMD 6035	1 M
SMD7050	1 M
HC-49U	1 M
HC-49US	6 M
Tuning Fork	5 M
Others	3 M
<b>Total</b>	<b>40 M</b>

Type	Vender
Crystal Bar	South Urals, Russia- Crystal Factory, TF
Base	SMI/NTK/KYOCERA (JP)
IC	NPC- Japan
Top Cover	Hua Nu Dike/Yoshikawa Corporation (JP)
Conductive Glue	Three Bond – (JP)














# Product Series







## Quartz Crystal

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
1	TX9	4M	1.2 x 1.0 x 0.3	32MHz-96MHz	4	
2	TX8	8M	1.6 x 1.2 x 0.35	26MHz-66MHz	4	
3	TX1	1M	2.0 x 1.6 x 0.5	20MHz-96MHz	4	
4	TX2	2M	2.5 x 2.0 x 0.55	12MHz-54MHz	4	
5	TX3	3M	3.2 x 2.5 x 0.7	8 MHz-104 MHz	4	
6	TX5	5M	5.0 x 3.2 x 0.9	8 MHz-100MHz	4	
7	TX6	6M	6.0 x 3.5 x 1.0	8MHz-80 MHz	4	
8	TX7	7M	7.0 x 5.0 x 1.1	6 MHz-110 MHz	4	
9	TG5	5G	5.0 x 3.2 x 1.2	8 MHz-80 MHz	2	
10	TG6	6G	6.0 x 3.5 x 1.2	8 MHz-80 MHz	2	
11	TG7	7G	7.0 x 5.0 x 1.4	6 MHz-80 MHz	2	
12	TG8	8G	8.0 x 4.5 x 1.5	6 MHz-80 MHz	2	
13	W12	2W	12.4 x 4.8 x 3.6	3.579MHz-27MHz	4	
14	WX6	9S	HC-49S 11.05 x 4.7 x 3.68	3.2 MHz-100 MHz	2	
15	WX6	6U	HC-49SS 11 x 4.7 x 2.0/2.5/3.0	3.2 MHz-100 MHz	2	
16	WX7	9M	HC-49SMD 13.0 x 4.73 x 4.0	3.2 MHz-100 MHz	2	
17	WS7	7S	HC-49SSMD 13 x 4.7 x 2.5/2.8/3.0	3.2 MHz-100 MHz	2	
18	WZ7	9L	Mini-49/S SMD 7.0 x 4.1 x 2.0	12MHz-32MHz	2	
19	WZ6	3S	HC-49/S 3Pin 11.05 x 4.7 x 3.5	3.2 MHz-100 MHz	3	

## Tuning fork Crystal

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
28	TS7	4X	1.2 x 1.0 x 0.5	32.768KHz	2	
29	TS8	8W	1.6 x 1.0 x 0.5	32.768KHz	2	
30	TS9	1W	2.0 x 1.2 x 0.6	32.768KHz	2	
31	WX1	1X	3.2 x 1.5 x 0.8	32.768KHz	2	
32	WX3	3X	3.8 x 8.0 x 2.5	30KHz-350KHz	4	
33	WX4	4X	6.9 x 1.4 x 1.3	32.768KHz	4	
34	WA1	2T	φ1.2 x 4.5	32.768KHz	2	
35	WX2	2X	φ2 x 6	30 KHz-350 KHz	2	
36	WT8	3T	φ3 x 8	30 KHz-350 KHz	2	
37	WA4	8A	φ2 x 6/SMD	32.768KHz	2	
38	WX8	9A	φ2 x 6 /SMD	30 KHz-350 KHz	2	

## Crystal Filter

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
39	WF1	1F	UM-1:7.8x3.2x7.8 UM-5:7.8x3.2x6.0	10MHz-45MHz	2/4	
40	WF2	2F	HC-49U/HC-49T: 11 x 5 x 12.5/11.0	7.8MHz-60MHz	2/4	
41	WF3	3F	11 x 8.5 to 18 x 12	7.8MHz-60MHz	4	
42	WF4	4F	45 x 21 x 15 52 x 47 x 21	0.18MHz-2MHz	4	
43	WF5	5F	30 x 20 to 45 x 21	7.8MHz-70MHz	4	
44	WF6	6F	30 x 20 to 60 x 25	7.8MHz-60MHz	4	











# Product Series








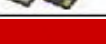
## Crystal Oscillator(CMOS)

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
46	TK2	4K	2.5 x 2.0 x 0.81	32.768KHz	4	
47	TK3	6K	3.2 x 2.5 x 0.95	32.768KHz	4	
48	TK4	8K	2.5 x 2.0 x 0.81	32.768KHz	4	
49	TK5	9K	3.2 x 2.5 x 0.95	32.768KHz	4	
50	TC1	1K	2.05 x 1.65 x 0.75	1.5MHz-50MHz	4	
51	TC2	2K	2.5 x 2.0 x 0.81	32.7KHz-125MHz	4	
52	TC3	3K	3.2 x 2.5 x 0.95	32.7KHz-125MHz	4	
53	TCS	5K	5.0 x 3.2 x 1.2	13.7KHz-160MHz	4	
54	TC7	7K	7.0 x 5.0 x 1.3	13.7KHz-166MHz	4	
55	TU2	1D	2.5 x 2.0 x 0.81	1MHz-50MHz	4	
56	TU3	2D	3.2 x 2.5 x 0.95	1MHz-50MHz	4	
57	TW2	3D	2.5 x 2.0 x 0.81	1.25MHz-100MHz	4	
58	TW3	4D	3.2 x 2.5 x 0.95	1.25MHz-100MHz	4	
59	TN2	5D	2.5 x 2.0 x 0.81	20MHz-60MHz	4	
60	TN3	6D	3.2 x 2.5 x 0.95	20MHz-60MHz	4	
61	LO1	8F	20.4 x 12.8 x 5	0.25MHz-180MHz	4	
62	LO2	8H	12.8 x 12.8 x 5	0.25MHz-180MHz	4	

## FASTXO Crystal Oscillator(CMOS)

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
63	TB1	1B	2.05 x 1.65 x 0.75	1MHz-200MHz	4	
64	TB2	2B	2.5 x 2.0 x 0.81	1MHz-200MHz	4	
65	TB3	3B	3.2 x 2.5 x 0.95	1MHz-200MHz	4	
66	TB5	5B	5.0 x 3.2 x 1.2	1MHz-200MHz	4	
67	TB7	7B	7.0 x 5.0 x 1.3	1MHz-200MHz	4	
68	TL2	1P	3.2 x 2.5 x 0.90	10MHz-250MHz	6	
69	TL4	3P	5.0 x 3.2 x 1.2	10MHz-250MHz	6	
70	TL6	5P	7.0 x 5.0 x 1.45	10MHz-250MHz	6	

## Crystal Oscillator(LVPECL/LVDS/HCSL/CML)

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
71	TL3	2P	3.2 x 2.5 x 0.90	10MHz-1500MHz	6	
72	TL5	4P	5.0 x 3.2 x 1.2	10MHz-1500MHz	6	
73	TL7	6P	7.0 x 5.0 x 1.45	10MHz-1500MHz	6	
74	TP3	1Q	3.2 x 2.5 x 0.90	10MHz-250MHz	6	
75	TP5	2Q	5.0 x 3.2 x 1.2	10MHz-320MHz	6	
76	TP7	3Q	7.0 x 5.0 x 1.45	10MHz-320MHz	6	
77	TN7	7D	7.0 x 5.0 x 1.45	70MHz-170MHz	6	
78	TS7	4Q	7.0 x 5.0 x 1.45	25MHz-75MHz	6	

# Product Series

## VCXO

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
79	PV3	2V	3.2 x 2.5 x 0.9	10MHz-250MHz	6	
80	PV5	4V	5.0 x 3.2 x 1.25	10MHz-250MHz	6	
81	PV7	6V	7.0 x 5.0 x 1.75	10MHz-250MHz	6	
82	PL3	3V	3.2 x 2.5 x 0.9	10MHz-1500MHz	6	
83	PL5	5V	5.0 x 3.2 x 1.25	10MHz-1500MHz	6	
84	PL7	7V	7.0 x 5.0 x 1.75	10MHz-1500MHz	6	
85	CL5	5L	5.0 x 3.2 x 1.25	30MHz-250MHz	6	
86	CL7	7L	7.0 x 5.0 x 1.75	1.5MHz-200MHz	6	
87	CV5	8L	5.0 x 3.2 x 1.25	1.5 MHz-170 MHz	6	
88	CV7	6L	7.0 x 5.0 x 1.75	1.5 MHz-170 MHz	6	
89	CV8	8V	14.2 x 9.3 x 5.4	30MHz-250MHz	6	
90	LV1	1L	Full Size/Half Size	1 MHz-80 MHz	4	
91	LV2	2L	13.9 x 9.1 x 3.6	50MHz-125MHz	4	

## TCXO/VCTCXO

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
92	VC1	1C	2.0 x 1.6 x 0.7	10MHz-52MHz	6	
93	VC2	2C	2.5 x 2.0 x 0.7	10MHz-52MHz	4	
94	VC3	3C	3.2 x 2.5 x 0.9	10MHz-52MHz	4	
95	VC5	5C	5.0 x 3.2 x 1.1	10MHz-52MHz	4	
96	VC7	7C	7.0 x 5.0 x 1.9	5MHz-52MHz	4	
97	VC8	8C	14.3 x 8.7 x 4.9	5MHz-40MHz	6	

## OCXO

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
105	OC9	1H	9.7 x 7.5 x 4.1	10 MHz-40 MHz	4	
106	OC8	2H	14.3 x 9.3 x 6.5	5 MHz-40 MHz	6	
107	OCH	3H	20.3 x 12.7 x 11.0	5 MHz-40 MHz	4	
108	OCW	4H	20.6 x 20.6 x 11.0	5 MHz-40 MHz	5	
109	OSD	5H	25.4 x 22.1 x 11.0	5 MHz-40 MHz	7	
110	OLH	6H	25.4 x 25.4 x 12.7	5 MHz-40 MHz	5	
111	OCN	7H	25.4 x 25.4 x 12.7	5 MHz-40 MHz	5	
112	OSH	8B	36.3 x 27.2 x 12.7	5 MHz-40 MHz	5	
113	OCD	9H	36.3 x 27.2 x 18.7	5 MHz-40 MHz	5	

## Dielectric Antenna

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
114	DA1	4C	10 x 10 to 35 x 35	1568/1575/1590MHz	-	
115	DA2	2A	8 x 8 to 25 x 25	1568/1575/1590MHz	-	
116	DA3	3A	12 x 12 to 25 x 25	BDS-B1/GPS-L1	-	
117	DA4	4A	43 x 37 x 13.6 61 x 61 x 18	BDS-B1/GPS-L1	-	
118	DA5	5A	φ6 X 5 to 30 x 30	915MHz/5810MHz	-	



# Product Series

## SAW Resonator

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
119	SR1	1Y	2.0 x 1.6 x 1.0	154MHz-1000MHz	4	
120	SR2	2Y	3.2 x 2.5 x 1.0	154MHz-1000MHz	4	
121	SR3	3Y	3.0 x 3.0 x 1.25	154MHz-1000MHz	6	
122	SR4	4Y	3.8 x 3.8 x 1.5	154MHz-1000MHz	6	
123	SR5	5Y	5.0 x 5.0 x 1.5	154MHz-1000MHz	8	
124	SR6	6Y	5.0 x 3.5 x 1.4	154MHz-1000MHz	4	
125	SR7	7Y	D11 8.4 x 3.5 x 2.9	154MHz-1000MHz	3	
126	SR8	8Y	F11 11.0 x 4.5 x 3.2	154MHz-1000MHz	4	
127	SR9	9Y	T039 φ9.15 x 3.15	154MHz-1000MHz	3	

## SAW FILTER

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
128	SF0	6E	1.1 x 0.9 x 0.5	800-2605MHz	5	
129	SF1	1E	1.4 x 1.1 x 0.6	800-2605MHz	5	
130	SF2	2E	2.0 x 1.5 x 0.6	800-2605MHz	4	
131	SF3	3E	3.0 x 3.0 x 1.25	300-2605MHz	6	
132	SF4	4E	3.8 x 3.8 x 1.5	100-1000MHz	6	
133	SF5	5E	5.0 x 5.0 x 1.5	100-1000MHz	8	
134	SF7	7E	D11 8.4 x 3.5 x 2.9	100-1000MHz	3	
135	SF8	8E	F11 11.0 x 4.5 x 3.2	100-1000MHz	4	
136	SF9	9E	T039 φ9.15 x 3.15	100-1000MHz	3	
137	SW1	1J	36 x 16 x 5.5	70MHz	6	

139	SW3	3J	27.2 x 12.6 x 7.0	70MHz-140MHz	6	
140	SW4	4J	22.5 x 17.5 x 7.5	70MHz	8	
141	SW5	5J	22.1 x 12.6 x 5.0	50MHz-150MHz	6	
142	SW6	6J	19.50 x 6.50 x 1.75	70MHz	10	
143	SW7	7J	14.5 x 10.0 x 5.1	140MHz	6	
144	SW8	8J	13.30 x 6.5 x 1.8	50MHz-150MHz	12	
145	SW9	9J	12.0 x 7.2 x 4.2	100MHz-1000MHz	4	

## Ceramic Resonator & Filter & Discriminator

Page	Series	P/N	Dimension(mm)	Frequency	PAD	Picture
146	ZTA	9I	6.0 x 5.5 to 10 x 7.5	1.79MHz-60MHz	2	
147	ZAD	8R	2.2 x 1.8 to 7.4 x 3.4	2MHz-60MHz	2	
148	ZTT	8I	6.0 x 5.5 to 10 x 7.5	1.79MHz-60MHz	3	
149	ZTD	7R	2.2 x 1.8 to 7.4 x 3.4	2MHz-60MHz	3	
150	ZTB	4I	5.2 x 6.8 to 13.5 x 14.7	150KHz-1.5MHz	2	
151	ZBD	2I	6.0 x 5.0 x 2.3 8.5 x 7.5 x 3.3	430KHz-1.25MHz	2	
152	CD1	1S	DIP 6.0 x 6.3 x 3.0 SMD 6.0 x 6.2 x 3.1	455KHz	2	
153	CD2	2S	DIP 9.0 x 7.0 x 4.0 SMD 3.7 x 3.1 x 1.4	10.7MHz	2	
154	CF1	1Z	8.0 x 8.0 x 7.0 11.0 x 8.0 x 7.0	455KHz	3/5	
155	CF2	3Z	6.5 x 6.3 x 6.5 9.5 x 6.3 x 6.5	455KHz	4/5	
156	CF3	5Z	6.5 x 6.0 x 4.0 6.5 x 11.9 x 3.0	450KHz-455KHz	3/4	
157	CF4	7Z	7.0*7.0*4.0	10.7MHz	3	
158	CF5	8Z	7.0 x 3.0 x 1.5 3.5 x 3.1 x 1.4	10.7MHz	3/4	

## ◆ WTL Company Profile

100% Pin to Pin Replacements  
Datasheet or P/N =>Across!




EPSON®



# WTL Company Profile

## WTL Series Spec. VS Other Brands

 <b>WTL series spec VS other Brand</b>											
Package	WTL Series	Abracon	HKC	TXC	Jauch	Murata	Kyocera	EPSON	Seiko	Citizen	ACAL/ACT
2.0*1.6/4/SMD	TX1	ABM12/ABM11	CQ	8Y	JXS21	XRCGB	CT2016DB	FA2016AN/ FA-128	-	-	ACT 2016SMX-4/ACI
2.5*2.0/4/SMD	TX2	ABM10	CK	8Z	JXS22	XRCHH	CT2520DB	FA-20H	-	-	ACT 2205SMX-4/ACI
3.2*2.5/4/SMD	TX3	ABM8G	C7	7M	JXS32	XRCH	CX3225SB	TSX-3225/ FA-238/ FA-238V	-	CS3255	ACT 325SMX-4/ACT 32255-SMX-4
5.0*3.2/4/SMD	TX5	ABM3B/ABM3C	CA	7B	JXS53	XRCLH	CX5032SB	-	-	-	ACT MESA53/ACT 5315SMX-4
6.0*3.5/4/SMD	TX6	ABMM2	C3	-	JXS63	-	-	-	-	-	ACT 6305MX-4
7.0*5.0/4/SMD	TX7	ABMM	C5	-	JXS75	-	-	-	-	-	ACT 7505MX-4
1.6*1.2/4/SMD	TX8	-	CT	8Q	JXS11	XRCFD/XRCMD	-	FA-118T	-	-	ACT 1016SMX-4
5.0*3.2/2/Glass	TG5	ABM3	CE	7A	JXG53P2	-	CX5032GA	-	-	-	-
6.0*3.5/2/Glass	TG6	ABM7	CC	-	JXG75P2	-	-	-	-	-	-
7.0*5.0/2/Glass	TG7	ABMM	CG	-	-	-	-	-	-	-	-
8.0*4.5/2/Glass	TG8	ABM2	C9	-	-	-	CX8045GA	-	-	-	-
HC-49U	WX5	-	9U	-	-	-	-	-	-	-	ACT HC49U Standard
HC-49S	WX6	ABL	9S	9B	SS3	-	-	-	-	HC49 / U-B	ACT HC49US Standard
HC-49S/3	WZ6	-	-	-	-	-	-	-	-	-	-
HC-49SMD	WX7	ABL52	SS S2 S3	9C	SMU2 SMU4	-	-	-	-	HCM49	ACT HC49US SMX
Mini HC-49SMD	WZ7	ABL7M/ABL7M2	-	-	-	-	-	-	-	-	-



# WTL Company Profile

## WTL Series Spec. VS Other Brands

UM-1/UM-5	WM1	-	1U	-	-	-	-	-	-	-	ACT UM1/ACT UM5
2.0*1.2/2/SMD	TS9	ABS06L	MQ	9HT11	JTX210	-	ST20125B	FC-12D	SC-20T	-	-
3.2*1.5/2/SMD	WX1	ABS07	M8	9HT10	JTX310	-	ST32155B	FC-135R	SC-32T	CM315D	-
6.9*1.4/2/SMD	WX4	ABS13	M6	9HT7	SMQ32SN	-	-	MC146	SSP-T7-F	CM130	-
3.8*8.0/2/SMD	WX3	ABS25	M3	-	SMQ32SL	-	-	MC147	-	CM200C	-
W12	W12	<u>Discontinued</u>	-	-	-	-	-	MC148	-	CM309E	-
2*6/DIP	WX2	AB26T/AB38T	2T/3T	-	MMTF32/MT F3	-	-	MC149	VT-200-F	CFS-206	-
6.0*5.5 to 10*7.5 DIP	ZTA	AWCR/AWSZT	-	-	-	-	-	MC150	-	-	ACT ZTA
6.0*5.5 to 10*7.5 DIP	ZTT	HWZT/AWSCR	-	-	-	CSTCC_G_A/ CSTCR_G_B/ CSTCE_G_A/ CSTCE_V_C/ CSACV_X_Q/ CSTCV_X_Q/ CSTLS_G/ CSTLS_X	-	MC151	-	-	ACT ZTT
ZTB	ZTB	-	-	-	-	-	-	MC152	-	-	-
2.0*1.6/4/OSC	TC1	ASA	-	8N	JO21	-	KC2016B- C1	MC153	-	-	-
2.5*2.0/4/OSC	TC2	ASD	CM	8W	JO22	XNCHH	KC2520C-C1 /KC2520C- C2	MC154	-	CSX- 252F	-
3.2*2.5/4/OSC	TC3	ASE2	C8	7X	JO32	XNCJH	KC3225A- C3(K25- 3C)	MC155	-	-	SM55xxLV/5 M 55xxLW/SM5 5



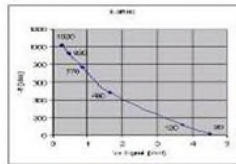
# WTL Company Profile

## WTL Series Spec. VS Other Brands

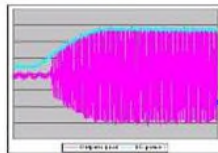
											XXLX
5.0*3.2/4/OSC	TC5	ASFL1	C2	7C	JO53	-	KC5032E-C3	MC156	-	-	SG5032CAN
7.0*5.0/4/OSC	TC7	ASV	C4	7W	JO75	-	KC7050A-C3(K53-3C)	MC157	-	CSX-750F	SG7050EAN
20.4*12.8/4/OSC	LO1	ACH/ACT	CF/CH	-	-	-	-	MC158	-	-	-
2.5*2.0/4/TCXD	VC2	ASVTX-12	-	7L	JT22C	-	-	MC159	-	-	VG2520CAN
3.2*2.5/4/TCXD	VC3	ASTX-11	-	7Q	JT32C	-	-	MC160	-	-	ACT 7SVH-4
5.0*3.2/4/TCXD	VC5	ASTX-09	-		JT53C	-	-	-	-	-	ACT 55CSV-4

## Matching Test

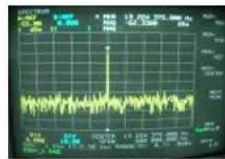
### PCB VS CRYSTAL Matching Test



-R plot



Start-up Time



Network/Spectrum Analyzer

### High Level Crystal Measurement

- ❖ Electronic Performance
  - General Spec
  - Specific Spec
- ❖ Reliability Performance
  - Standard
  - Tailor Made

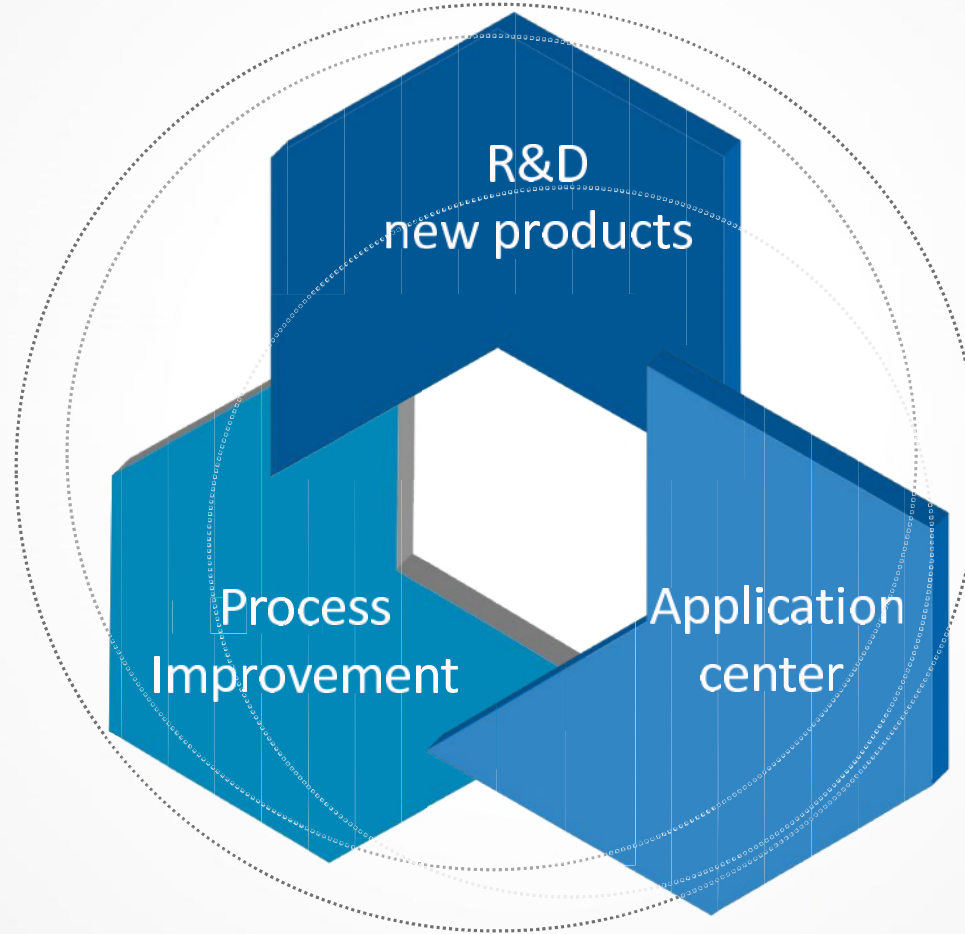
### Technical Training/ Seminar

- ❖ Client In-House Technical Training
- ❖ Public Seminar



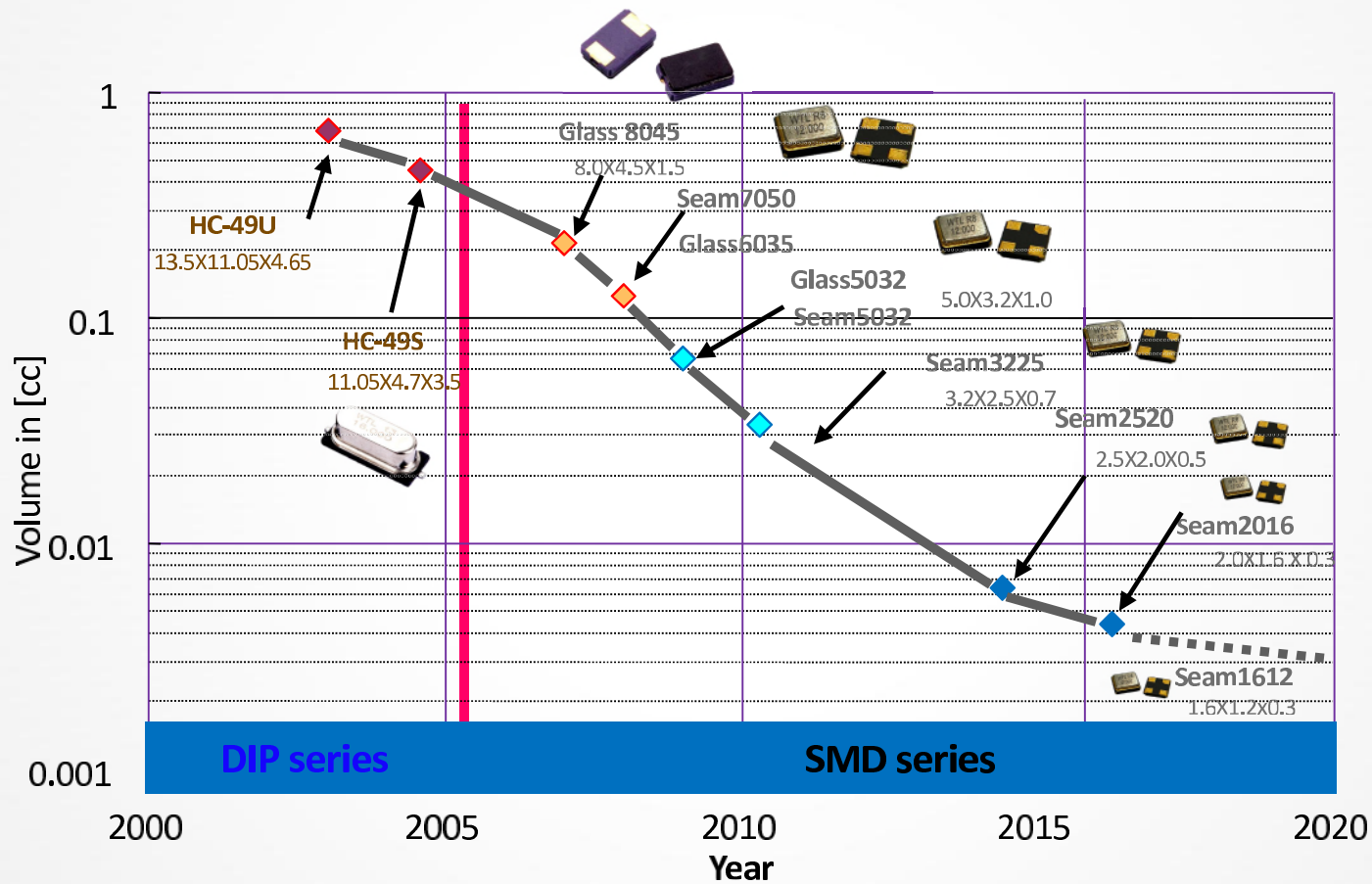
# ◆ WTL Company Profile

## R&D Center



# WTL Company Profile

## Road Map Smaller and SMD





## Smart Home

Continuous & Stable  
Frequency Control Signal



## Smart Wear



## ISO9001 Certificate



**CEPREI**



**ANAB ACCREDITED**  
MANAGEMENT SYSTEMS CERTIFICATION BODY



**IAF**  
MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

Registration Number: AN17Q3020R0S  
Issue Date: February 13, 2017  
Expiry Date: February 12, 2020  
Re-Issue Date: January 05, 2018

Note: Further clarification regarding the scope of this certificate and the applicability of ISO 9001:2015 requirements may be obtained by consulting the organization.  
The information of this certificate may be verified by visiting Official CSCA Website (www.cscacert.com.cn)  
No.110 Dongguanhuang Rd., Guangzhou, Guangdong, 510610 China

  
**Zhao Guoxiang**  
 General Manager  
**CEPREI CERTIFICATION BODY**



Continuing validity of the certificate depends on reception regular surveillance audit and qualified, please scan the QR code to get the related validity.

**Quality Management System Certificate**

(Original)  
This is to certify that

**WTL INTERNATIONAL LIMITED**

Unified Social Credit Identifier: 91440300596790719B

Registration Address: 505, 5/F, NO.6 FACTORY, ZHONGCHU BUILDING, 4TH BAGUA ROAD, BAGUALING, FUTIAN DISTRICT, SHENZHEN, GUANGDONG, P.R.CHINA

Has implemented and maintains a Quality Management System in compliance with

**ISO 9001:2015**

The Quality Management System is applicable to:

**R&D, SALES OF QUARTZ RESONATOR, FILTER, OSCILLATOR**

Involved site (s) and relevant activities

Address	Zip Code	Main Activities
505, 5/F, NO.6 FACTORY, ZHONGCHU BUILDING 4TH BAGUA ROAD, BAGUALING, FUTIAN DISTRICT, SHENZHEN, GUANGDONG, P.R.CHINA	518029	R&D, SALES OF QUARTZ RESONATOR, FILTER, OSCILLATOR



**CEPREI**



**ANAB ACCREDITED**  
MANAGEMENT SYSTEMS CERTIFICATION BODY



**IAF**  
MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

注册号: AN17Q3020R0S  
颁证日期: 2017.02.13  
有效期至: 2020.02.12  
换证日期: 2018.01.05

注: 请见本证书范围和 ISO9001:2015 标准的适用范围问题, 可以通过向发证机构索取相关资料。  
本证书信息可在国家认证认可监督管理委员会官方网站 (www.cnca.gov.cn) 上查询。  
中国广东省广州市荔湾区 110 号  
邮编: 510610

  
**总经理**



本证书持续有效性依赖于定期接受监督审核并符合合格标准, 有关效力请扫描二维码

**质量管理体系认证证书**

(正本)  
兹证明

**深圳市维拓精电科技有限公司**

统一社会信用代码: 91440300596790719B

注册地址: 深圳市福田区八卦岭八卦四路中房 6 号综合厂房五层 505

已按照

**ISO 9001:2015**

标准要求建立并实施了质量管理体系。  
该管理体系适用于

**石英谐振器、滤波器、振荡器的研发和销售**

涉及的场所及相关活动:

场所地址	场所邮编	场所主要活动
广东省深圳市福田区八卦岭八卦四路中房 6 号综合厂房 5 层 505	518029	石英谐振器、滤波器、振荡器的研发和销售



## ISO14001 Certificate



**Environmental Management System Certificate**

(Original)  
This is to certify that



**WTL INTERNATIONAL LIMITED**

Unified Social Credit Identifier: 91440300596790719B

Registration Address: 505, 5/F, NO.6 FACTORY, ZHONGCHU BUILDING, 4TH BAGUA ROAD, BAGUALING, FUTIAN DISTRICT, SHENZHEN, GUANGDONG, P.R. CHINA

Has implemented and maintains an Environmental Management System in compliance with **ISO 14001:2015**

The Environmental Management System is applicable to:

**R&D, SALES OF QUARTZ RESONATOR, FILTER, OSCILLATOR**

Involved site (s) and relevant activities

Address	Zip Code	Main Activities
305, 5/F, NO.6 FACTORY, ZHONGCHU BUILDING, 4TH BAGUA ROAD, BAGUALING, FUTIAN DISTRICT, SHENZHEN, GUANGDONG, P.R. CHINA	518029	R&D, SALES OF QUARTZ RESONATOR, FILTER, OSCILLATOR



Registration Number: AN17E2021R0S  
Issue Date: February 13, 2017  
Expiry Date: February 12, 2020  
Re-Issue Date: January 05, 2018

Note: The information of this certificate may be verified by visiting Office CMC (A) Website ([www.cmc.com.cn](http://www.cmc.com.cn))

No. 110 Dongguosheng Rd., Guangzhou, Guangdong, 510610 China



**Zhao Guoxiang**  
General Manager  
CEPREI CERTIFICATION BODY



Continuing validity of this certificate depends on inspection regular surveillance audits and qualified, please scan the QR code to get the real-time validity.



**环境管理体系认证证书**

(正本)  
兹证明



**深圳市维拓精电科技有限公司**

统一社会信用代码: 91440300596790719B

注册地址: 深圳市福田区八卦岭八卦四路中研6号综合厂房五层505

已按照 **ISO 14001:2015** 标准要求建立并实施了环境管理体系, 该管理体系适用于

**石英谐振器、滤波器、振荡器的研发和销售**

涉及的场所及相关活动:

场所地址	场所邮编	场所主要活动
广东省深圳市福田区八卦岭八卦四路中研6号综合厂房5层505	518029	石英谐振器、滤波器、振荡器的研发和销售

注册号: AN17E2021R0S  
颁证日期: 2017.02.13  
有效期至: 2020.02.12  
换证日期: 2018.01.05

注: 本证书信息可在国家认证认可监督管理委员会官方网站 ([www.cnca.gov.cn](http://www.cnca.gov.cn)) 上查询。

中国广东省广州市东圃西路110号  
邮编: 510610





本证书的有效性取决于定期接受监督审核, 审核合格, 请关注证书二维码。



# WTL Company Profile

## RoHS Compliant



**Test Report**  
No. SZXEC1800169103


WTL INTERNATIONAL LIMITED  
ROOM 505, 5TH FLOOR, NO 6 FACTORY, ZHONG CHU BUILDING  
LING, FUTIAN DISTRICT, SHENZHEN

The following sample(s) was/were submitted and identified on behalf:  
SGS Job No.: RP18-001600 - SZ  
Model No.: HC-49S  
Client Ref. Info.: HC-49U, HC-50U, HC-49T, UM-1, UM-5;  
ZTD, ZTC, TO-39, F11, D11, MCF DIP, 2"

Date of Sample Received: 06 Feb 2018  
Testing Period: 06 Feb 2018 - 09 Feb 2018  
Test Requested: Selected test(s) as requested by client.  
Test Method: Please refer to next page(s).  
Test Results: Please refer to next page(s).

Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

*Kenny*  
Kenny Li  
Approved Signatory



**Test Report**  
No. SZXEC1800169103

**Test Results:**

**Test Part Description:**

Specimen No.	SGS Sample ID	Description
SN1	SZX18-001691.002	"HC 49S"(mixed)


**Remarks:**

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

**Elemental Analysis, Flame Retardants & Phthalate(s)**

Test Method: With reference to IEC 62321-4:2013+A1:2017, IEC 62321-6:2012-6:2016 and IEC 62321-8:2017, analyzed by ICP-OES

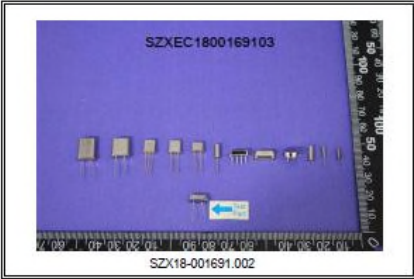
Test Item(s)	Limit	Unit	MDL
Cadmium (Cd)	100	mg/kg	2
Lead (Pb)	1,000	mg/kg	2
Mercury (Hg)	1,000	mg/kg	2
Hexavalent Chromium (Cr(VI))	1,000	mg/kg	8
Sum of PBBs	1,000	mg/kg	-
Monobromobiphenyl	-	mg/kg	5
Dibromobiphenyl	-	mg/kg	5
Tribromobiphenyl	-	mg/kg	5
Tetrabromobiphenyl	-	mg/kg	5
Pentabromobiphenyl	-	mg/kg	5
Hexabromobiphenyl	-	mg/kg	5
Heptabromobiphenyl	-	mg/kg	5
Octabromobiphenyl	-	mg/kg	5
Nonabromobiphenyl	-	mg/kg	5
Decabromobiphenyl	-	mg/kg	5
Sum of PBDEs	1,000	mg/kg	-
Monobromodiphenyl ether	-	mg/kg	5
Dibromodiphenyl ether	-	mg/kg	5
Tribromodiphenyl ether	-	mg/kg	5
Tetrabromodiphenyl ether	-	mg/kg	5
Pentabromodiphenyl ether	-	mg/kg	5




**Test Report**  
No. SZXEC1800169103

Date: 09 Feb 2018 Page 6 of 8


**Sample photo:**




SGS authenticate the photo on original report only  
\*\*\* End of Report \*\*\*



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed on the reverse side of this report. The Company shall not be held responsible for any loss or damage caused by the use of this report. The Company shall not be held responsible for any loss or damage caused by the use of this report. The Company shall not be held responsible for any loss or damage caused by the use of this report.



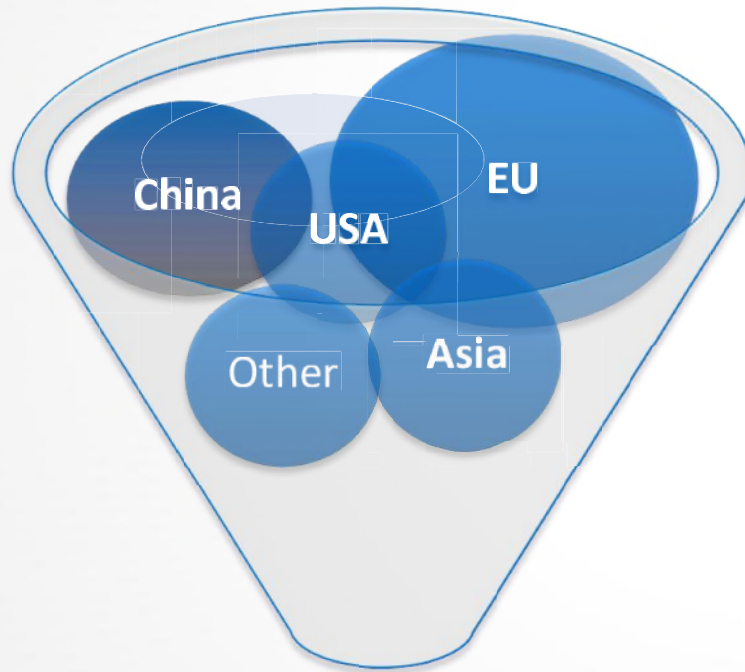
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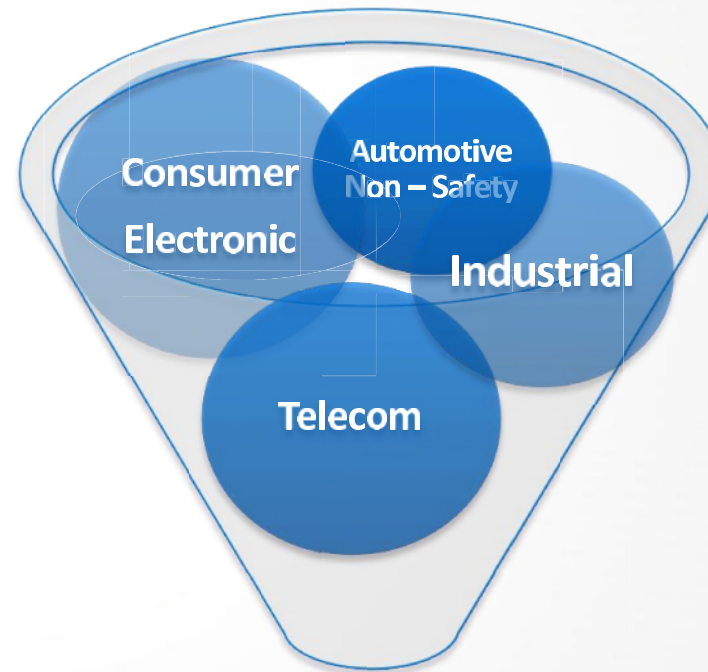
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# WTL Company Profile

## WTL SCALE



Regional Business Footprint



Market Segment

# ❖ WTL Company Profile

## Footprints & Partners



- ❖ WTL sells to 72 countries and regions (2017)



# ◆ WTL Company Profile

## Some Customers





# ◆ WTL Company Profile

## Offline & Online



November 13-16,2018  
Messe München

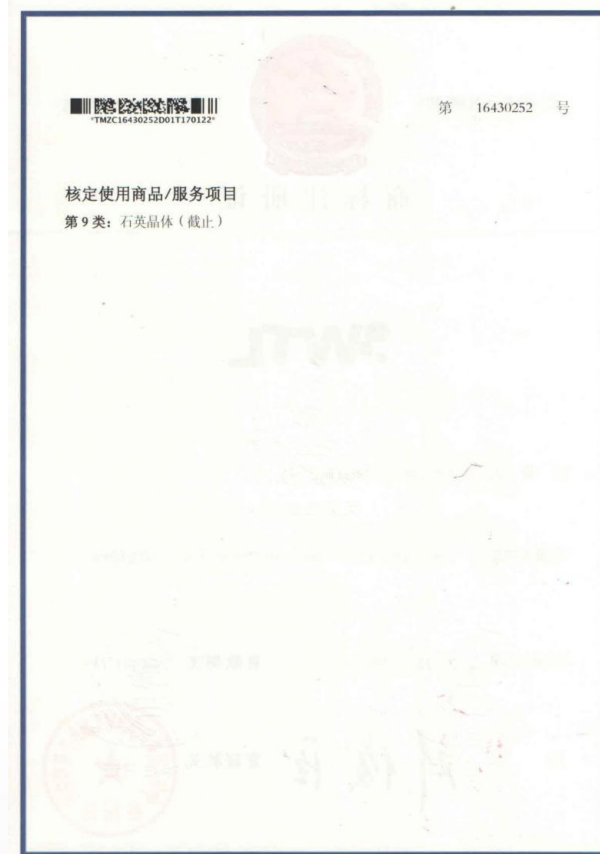




# WTL Company Profile



## Trademark Registered In China



# WTL Company Profile

## Madrid Trademark (Global)

Madrid trademark registration over the world (This is a Partial Listing)

Italy

Austria

USA

Benelux [Belgium, Netherlands, Luxembourg]

Ukraine

Switzerland

India

Romania

Germany

Philippines

Portugal

France

Hungary

Spain

Russia

Greece

Czech

Belarus

Poland

UK



Copyright @ WTL International Limited

# WTL Company Profile

## Some Distributors



## ◆ WTL Company Profile

### Contact us!

- Tel: +86-755-82677582
- Cell : +86 137 5115 3787
- Email: wtl@wtlcrystals.com
- Skype: wtl.lily
- **Youtube @ WTL factory:**  
<https://www.youtube.com/watch?v=0BCFnas3ruA>





- ✓ *Current case*
- ✓ *More design-in and Across?*



图片来源：视觉中国 [www.vcg.com](http://www.vcg.com)



# THANKS

**WTL International Limited**  
**Frequency Oscillator Experts**