

# CRYSTAL BROCHURE


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深圳市晶科鑫实业有限公司  
SHENZHEN CRYSTAL TECHNOLOGY INDUSTRIAL CO., LTD.

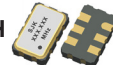



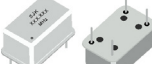
# Quartz Crystal

Type	Package	Freq. range	Features
7S	 <b>1.2×1.0×0.3mm</b> Seam sealed SMD	<b>24~54MHz</b>	<ul style="list-style-type: none"> <li>• Ultra smaller size</li> <li>• High stability</li> </ul>
7Y	 <b>1.6×1.2×0.35mm</b> Seam sealed SMD	<b>24~54MHz</b>	<ul style="list-style-type: none"> <li>• Ultra smaller size</li> <li>• High stability</li> </ul>
7F	 <b>2.0×1.6×0.5mm</b> Seam sealed SMD	<b>16~96MHz</b>	<ul style="list-style-type: none"> <li>• Ultra smaller size</li> <li>• High stability</li> </ul>
7E	 <b>2.5×2.0×0.55mm</b> Seam sealed SMD	<b>12~54MHz</b>	<ul style="list-style-type: none"> <li>• Smaller size</li> <li>• High stability</li> </ul>
7U	 <b>3.2×2.5×0.7mm</b> Seam sealed SMD	<b>8~64MHz</b>	<ul style="list-style-type: none"> <li>• High precision</li> <li>• High stability</li> </ul>
7I	 <b>5.0×3.2×0.9mm</b> Seam sealed SMD	<b>8~125MHz</b>	<ul style="list-style-type: none"> <li>• High precision</li> <li>• High stability</li> </ul>
6G	 <b>6.0×3.5×1.0mm</b> Seam sealed SMD	<b>8~100MHz</b>	<ul style="list-style-type: none"> <li>• Tight tolerance</li> </ul>
6F	 <b>7.0×5.0×1.0mm</b> Seam sealed SMD	<b>6~160MHz</b>	<ul style="list-style-type: none"> <li>• Tight tolerance</li> </ul>
7Z	 <b>2.5×2.0×0.75mm</b> Glass sealed SMD	<b>12~64MHz</b>	<ul style="list-style-type: none"> <li>• Ultra smaller size</li> <li>• Glass seam package</li> </ul>
7V	 <b>3.2×2.5×0.8mm</b> Glass sealed SMD	<b>8~60MHz</b>	<ul style="list-style-type: none"> <li>• Smaller size</li> <li>• Glass seam package</li> </ul>
6I	 <b>5.0×3.2×0.9mm</b> Glass sealed SMD	<b>8~54MHz</b>	<ul style="list-style-type: none"> <li>• Smaller size</li> <li>• Glass seam package</li> </ul>
6A	 <b>11.05×4.65×13.46mm</b> HC-49U Through-hole	<b>1.8432~150MHz</b>	<ul style="list-style-type: none"> <li>• High reliability</li> <li>• High stability</li> </ul>
6B	 <b>10.5×3.5×3.0mm</b> HC-49S Package	<b>3~100MHz</b>	<ul style="list-style-type: none"> <li>• Standard footprint</li> <li>• PCB stacking</li> <li>• Ultra smaller size</li> </ul>
6C	 <b>13.0×4.8×4.0/3.0mm</b> HC-49SMD Package	<b>3~100MHz</b>	<ul style="list-style-type: none"> <li>• Metal can SMD package</li> </ul>
6D/6E	 <b>7.8×3.2×7.8/6.0mm</b> UM-1/UM-5 Package	<b>4~200MHz</b>	<ul style="list-style-type: none"> <li>• High frequency range</li> </ul>
6Z	 <b>2.0×6.0/3.0×8.0mm</b> Cylinder Through-hole	<b>3.579~50MHz</b>	<ul style="list-style-type: none"> <li>• Small size</li> <li>• High shock tolerance</li> </ul>







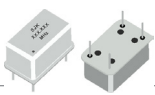

# Tuning Fork Crystal

Type	Package	Freq. range	Features
7K 	1.6×1.0×0.5mm Seam sealed SMD	32.768kHz	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>SMD Watch Crystal</li> </ul>
7R 	2.0×1.2×0.6mm Seam sealed SMD	32.768kHz	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>SMD Watch Crystal</li> </ul>
7L 	3.2×1.5×0.75mm Seam sealed SMD	32.768kHz	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>SMD Watch Crystal</li> </ul>
7M 	7.0×1.5×1.4mm Plastic SMD	32.768kHz	<ul style="list-style-type: none"> <li>Small size</li> <li>SMD Watch Crystal</li> </ul>
6LC 	8.0×3.8×2.5mm Plastic SMD	32.768kHz (30~350kHz)	<ul style="list-style-type: none"> <li>SMD Watch Crystal</li> </ul>
6K 	2.0×6.0/3.0×8.0mm Through-hole	32.768kHz (30~350kHz)	<ul style="list-style-type: none"> <li>Watch Crystal</li> </ul>









# VCXO - Voltage Controlled Crystal Oscillator

Type	Package	Freq. range	Output	Features
3S 	3.2×2.5×0.9mm Seam sealed SMD	10~250MHz	CMOS	<ul style="list-style-type: none"> <li>Smaller size</li> <li>Low jitter</li> </ul>
3P/3V 	3.2×2.5×0.9mm Seam sealed SMD	10~1500MHz	LVPECL /LVDS	<ul style="list-style-type: none"> <li>Smaller size</li> <li>Differential logic</li> </ul>
5S 	5.0×3.2×1.2mm Seam sealed SMD	10~250MHz	CMOS	<ul style="list-style-type: none"> <li>Smaller size</li> <li>Low jitter</li> </ul>
5V/5P/5VH 	5.0×3.2×1.2mm Seam sealed SMD	10~1500MHz	LVPECL /LVDS/HCSL/HCSL	<ul style="list-style-type: none"> <li>Smaller size</li> <li>Differential logic</li> </ul>
6S 	7.0×5.0×1.4mm Seam sealed SMD	10~250MHz	CMOS	<ul style="list-style-type: none"> <li>Tight symmetry</li> <li>Low phase noise</li> </ul>
7P/6V/7VH 	7.0×5.0×1.4mm Seam sealed SMD	10~1500MHz	LVPECL /LVDS/HCSL/HCSL	<ul style="list-style-type: none"> <li>Wide pulling range</li> <li>Differential logic</li> </ul>
9N/9P 	14.0×9.1×3.6mm FR-4 PCB SMD	50~125MHz	CMOS /Sine wave	<ul style="list-style-type: none"> <li>FR-4 PCB based</li> <li>3-state available</li> </ul>
6RH 	12.9×12.9×5.5mm Through-hole	1~200MHz	CMOS	<ul style="list-style-type: none"> <li>Standard DIP 8 Pin</li> <li>Low phase noise</li> </ul>
6RF 	20.4×13.1×6.0mm Through-hole	1~220MHz	CMOS	<ul style="list-style-type: none"> <li>Standard DIP 14 Pin</li> <li>Low phase noise</li> </ul>




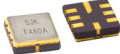


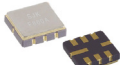
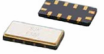


# Crystal Oscillators - CMOS Output

Type	Package	Freq. range	Output	Features
8N 	1.6×1.2×0.5mm Seam sealed SMD	1~80MHz	CMOS	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>Low jitter</li> </ul>
1N 	2.0×1.6×0.75mm Seam sealed SMD	4~54MHz	CMOS	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>Low jitter</li> </ul>
2N 	2.5×2.0×0.8mm Seam sealed SMD	32.768kHz~75MHz	CMOS	<ul style="list-style-type: none"> <li>Smaller size</li> <li>Low jitter</li> </ul>
3N 	3.2×2.5×1.0mm Seam sealed SMD	32.768kHz~125MHz	CMOS	<ul style="list-style-type: none"> <li>Smaller size</li> <li>Low phase noise</li> </ul>
7N 	5.0×3.2×1.2mm Seam sealed SMD	32.768kHz~160MHz	CMOS	<ul style="list-style-type: none"> <li>Smaller size</li> <li>Low current consumption</li> </ul>
6N 	7.0×5.0×1.3mm Seam sealed SMD	32.768kHz~200MHz	CMOS	<ul style="list-style-type: none"> <li>Smaller size</li> <li>Low jitter</li> </ul>
6MF 	20.4×13.1×5.3mm Through-hole	0.25~180MHz	CMOS	<ul style="list-style-type: none"> <li>All metal welded package</li> <li>14-Pin full-size</li> </ul>
6MH 	12.9×12.9×5.3mm Through-hole	0.25~180MHz	CMOS	<ul style="list-style-type: none"> <li>All metal welded package</li> <li>8-Pin full-size</li> </ul>





# Oven Controlled Crystal Oscillator/OCXO

Type	Package	Freq.range	Output	Feature
1X 	9.7×7.5×4.1mm Seam sealed SMD	10~40MHz	Rectangular /Clipped	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>SC-cut crystal</li> </ul>
9X 	14.5×9.6×6.5mm Seam sealed SMD	5~40MHz	HCMOS	<ul style="list-style-type: none"> <li>AT-cut crystal</li> <li>Low power consumption</li> </ul>
2X 	20.3×12.7×11.0mm DIP-14 Full-size	5~100MHz	HCMOS /Sinewave	<ul style="list-style-type: none"> <li>SC or AT-cut crystal</li> <li>High stability</li> </ul>
3X 	20.6×20.6×11.0mm Thru-hole DIP	5~40MHz	HCMOS	<ul style="list-style-type: none"> <li>Smaller size</li> <li>SC-cut crystal</li> </ul>
5X 	25.4×22.1×11.0mm Seam sealed SMD	5~40MHz	HCMOS	<ul style="list-style-type: none"> <li>SC or AT-cut crystal</li> <li>High stability</li> </ul>
5X2 	25.4×22.1×13.2mm Seam sealed SMD	10~100MHz	Sinewave	<ul style="list-style-type: none"> <li>SC-cut crystal</li> <li>Fast warm-up</li> </ul>
9M 	25.4×25.4×12.7mm Thru-hole DIP	5~100MHz	Rectangular/ Sinewave	<ul style="list-style-type: none"> <li>SC-cut crystal</li> <li>Low phase noise</li> </ul>
6X 	36.3×27.2×12.7mm Thru-hole DIP	5~100MHz	LVTTTL/HCMOS / SineWave	<ul style="list-style-type: none"> <li>SC-cut crystal</li> <li>Stratum 3E compliant</li> </ul>

# SAW Resonator & Filter

Type	Package	Freq. range	Features
6AW 	3.2×2.5×0.7mm Seam Sealed SMD	315/433.92MHz	<ul style="list-style-type: none"> <li>• Ultra small size</li> <li>• Low insert loss</li> </ul>
QCC8D 	3.0×3.0×1.4mm Seam sealed SMD	249.5~3700MHz	<ul style="list-style-type: none"> <li>• Ultra small size</li> <li>• Low insert loss</li> </ul>
DCC6C 	3.0×3.0×1.5mm Seam sealed SMD	120~2675MHz	<ul style="list-style-type: none"> <li>• Ultra small size</li> <li>• Low insert loss</li> </ul>
QCC8B 	3.8×3.8×1.3mm Seam sealed SMD	177~1990MHz	<ul style="list-style-type: none"> <li>• Small size</li> <li>• Low insert loss</li> </ul>
DCC6 	3.8×3.8×1.5mm Seam sealed SMD	315~868MHz	<ul style="list-style-type: none"> <li>• Ultra small size</li> <li>• Low insert loss</li> </ul>
QCC4A 	5.0×3.5×1.5mm Seam sealed SMD	315~868MHz	<ul style="list-style-type: none"> <li>• Small size</li> <li>• Low insert loss</li> </ul>
QCC8C 	5.0×5.0×1.5mm Seam sealed SMD	299~868MHz	<ul style="list-style-type: none"> <li>• Small size</li> <li>• Low insert loss</li> </ul>
QCC12 	13.3×6.5×1.6mm Seam sealed SMD	70~899MHz	<ul style="list-style-type: none"> <li>• Small size</li> <li>• Low insert loss</li> </ul>
TO-39 	9.15×9.15×3.3mm TO-39	303~868MHz	<ul style="list-style-type: none"> <li>• Small size</li> <li>• Low insert loss</li> </ul>
F-11 	10.9×4.45×4.0mm F-11	303~868MHz	<ul style="list-style-type: none"> <li>• Small size</li> <li>• Low insert loss</li> </ul>







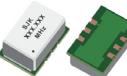
# MCF - Monolithic Crystal Filter

Type	Package	Freq. range	Features
7DUT 	11.5×4.5×11.2mm HC-49T	10.7~45MHz	<ul style="list-style-type: none"> <li>• Low insertion loss</li> <li>• High selectivity</li> </ul>
7DU1 	7.8×3.1×8.0mm UM-1	10.7~45MHz	<ul style="list-style-type: none"> <li>• Low insertion loss</li> <li>• High selectivity</li> </ul>
7DU5 	7×3.1×6.0mm UM-5	10.7~45MHz	<ul style="list-style-type: none"> <li>• Low insertion loss</li> <li>• High selectivity</li> </ul>
CF 	7.0×5.0×1.3mm Seam sealed SMD	21.4~73.35MHz	<ul style="list-style-type: none"> <li>• Excellent shock and vibration resistance</li> <li>• SMD package for automatic pick</li> </ul>

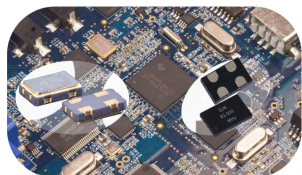
# TCXO - Temperature Compensated Crystal Oscillator

Type	Package	Freq. range	Output	Features
7X 	2.0×1.6×0.75mm Seam sealed SMD	10~60MHz	Clipped Sinewave	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>VCTCXO available</li> </ul>
7Q 	2.5×2.0×0.7mm Seam sealed SMD	32.768kHz~60MHz	Clipped Sinewave	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>VCTCXO available</li> </ul>
7W 	2.5×2.0×0.85mm Seam sealed SMD	10~60MHz	LVC MOS	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>0.5ppm~2.0ppm</li> </ul>
8W 	3.2×2.5×1.0mm Seam sealed SMD	32.768kHz~60MHz	Clipped Sinewave	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>VCTCXO available</li> </ul>
7T 	3.2×2.5×1.0mm Seam sealed SMD	10~60MHz	LVC MOS	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>0.5ppm~2.0ppm</li> </ul>
5T 	5.0×3.2×1.5mm Seam sealed SMD	10~60MHz	Clipped Sinewave	<ul style="list-style-type: none"> <li>Small size</li> <li>VCTCXO available</li> </ul>
8T 	7.0×5.0×2.0mm Seam sealed SMD	32.768kHz~60MHz	Clipped Sinewave	<ul style="list-style-type: none"> <li>Small size</li> <li>VCTCXO available</li> </ul>
9T 	14.5×9.6×6.5mm FR-4 PCB SMD	40~125MHz	LVC MOS	<ul style="list-style-type: none"> <li>Standard DIP 14Pin</li> <li>Low phase noise</li> </ul>
6T 	20.4×12.8×7.8mm Through hole	1.25~52MHz	Clipped Sinewave	<ul style="list-style-type: none"> <li>FR-4 PCB based</li> <li>VCTCXO available</li> </ul>

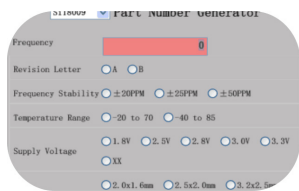
## Crystal Oscillator - Differential Output

Type	Package	Freq. range	Output	Features
3J/3D 	3.2×2.5×1.0mm Seam sealed SMD	10~250MHz	LVPECL /LVDS	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>Low jitter</li> </ul>
3H 	3.2×2.5×1.0mm Seam sealed SMD	10~250MHz	HCSL	<ul style="list-style-type: none"> <li>Ultra smaller size</li> <li>Low jitter</li> </ul>
5J/5D 	5.0×3.2×1.2mm Seam sealed SMD	10MHz~1.5GHz	LVPECL /LVDS	<ul style="list-style-type: none"> <li>Small size</li> <li>Low jitter</li> </ul>
5H 	5.0×3.2×1.25mm Seam sealed SMD	10~220MHz	HCSL	<ul style="list-style-type: none"> <li>Small size</li> <li>Low jitter</li> </ul>
7J/7B 	7.0×5.0×1.4mm Seam sealed SMD	10MHz~1.5GHz	LVPECL /LVDS	<ul style="list-style-type: none"> <li>Small size</li> <li>Low jitter</li> </ul>
7H 	7.0×5.0×1.4mm Seam sealed SMD	10~220MHz	HCSL	<ul style="list-style-type: none"> <li>Small size</li> <li>Low jitter</li> </ul>
9J/9D 	14.0×9.0×5.4mm SMD	25~700MHz	LVPECL /LVDS	<ul style="list-style-type: none"> <li>Low phase noise</li> <li>Low jitter</li> </ul>

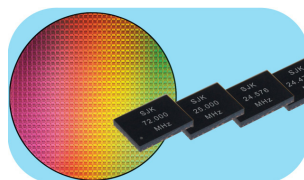
## Special Introduced product - MEMS Oscillator



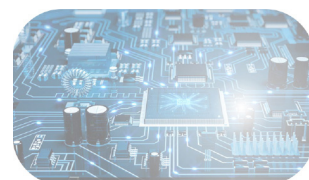
MEMS Oscillator can be Pin-to-Pin quartz Oscillator



Programmable, Samples 48hrs fast delivery




High performance, Low power More reliable, Lower cost




Ultra-smaller, Up to 80% space reduction


## Low Power MEMS Oscillator

Type	Package	Freq.range	Output	Feature
	2.0×1.6 / 2.5×2.0 / 3.2×2.5 / 5.0×3.2 / 7.0×5.0 mm	1~137MHz	LVC MOS / HCMOS	<ul style="list-style-type: none"> <li>• Low power of 3.5mA at 1.8V.</li> <li>• Faster delivery.</li> <li>• Ultra low power: 3.5mA</li> </ul>

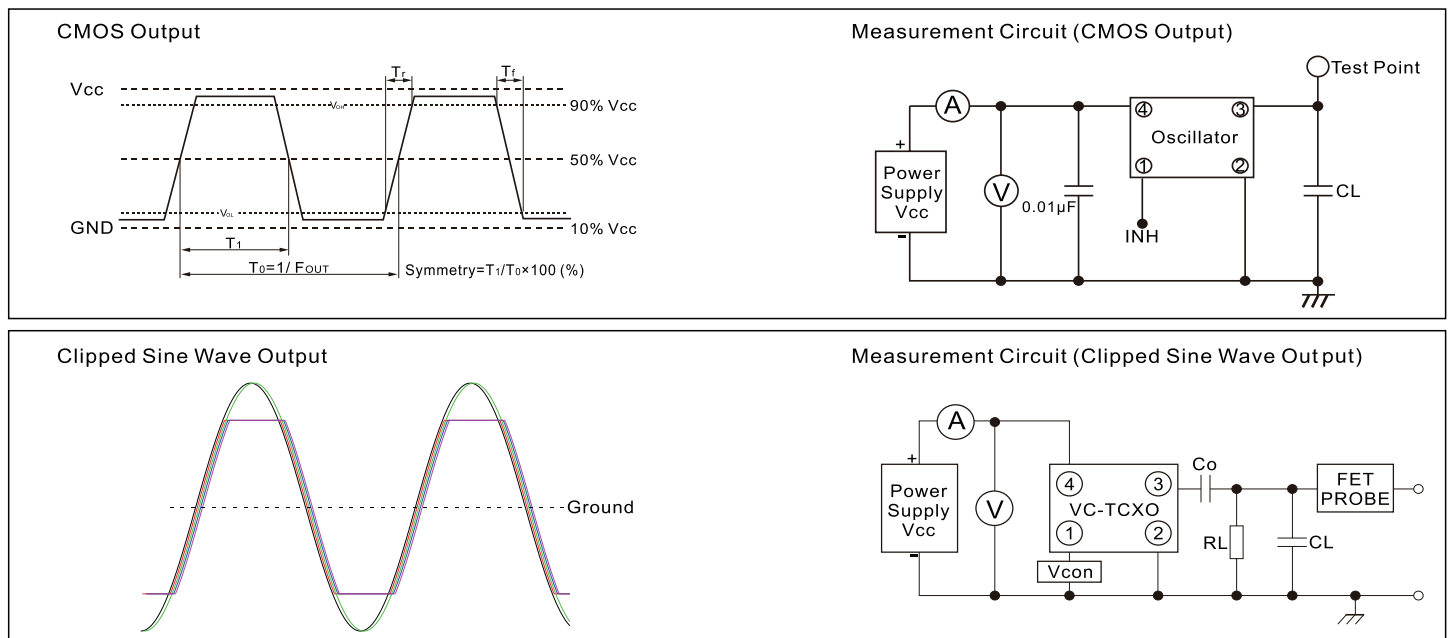
## Differential MEMS Oscillator

Type	Package	Freq.range	Output	Feature
	3.2×2.5 / 5.0×3.2 / 7.0×5.0 mm	1~725MHz	LVPECL / LVDS / HCSL	<ul style="list-style-type: none"> <li>• LVPECL/LVDS/HCSL output</li> <li>• Low phase jitter</li> <li>• ±10ppm stability</li> </ul>

## High Temperature MEMS

Type	Package	Freq.range	Output	Feature
	2.0×1.6 / 2.5×2.0 / 3.2×2.5 / 5.0×3.2 / 7.0×5.0 mm	1~137MHz	LVC MOS / LV TTL	<ul style="list-style-type: none"> <li>• Supply voltage: 1.8, 2.5, 3.0, 3.3V</li> <li>• Faster delivery.</li> <li>• Temp: -40°C ~ +105°C</li> </ul>

## Output Type And Test Circuit



## Guide To Order

Company \_\_\_\_\_  
 Name \_\_\_\_\_ Date \_\_\_\_\_  
 Phone \_\_\_\_\_ Fax \_\_\_\_\_ Email \_\_\_\_\_

## Crystal Resonator

Frequency \_\_\_\_\_ MHz/kHz      Quantity \_\_\_\_\_

Type     7050     6035     5032     3225     2520     2016     1612     1210  
 49SMD     49/S     49/U     UM-1/5     1610     2012     3215     MC146  
 308C     206B     2×6     3×8     2520G     3225G     5032G     8045G

Vibration mode     AT-Cut     BT-Cut     Fund     3rd Overtone

Load Capacitance \_\_\_\_\_ PF      Resistance ESR \_\_\_\_\_ Max  
 Frequency Tolerance @25 \_\_\_\_\_ PPM      Frequency Stability \_\_\_\_\_ PPM  
 Operating Temperature Range \_\_\_\_\_ °C

## Crystal Oscillator

Frequency \_\_\_\_\_ MHz/kHz      Quantity \_\_\_\_\_

Mode     OSC     VCXO     TCXO     OCXO     RTC OSC

Type     7×5     5×3.2     3.2×2.5     2.5×2.0     2.0×1.6     1.6×1.2     14×9.0     25×22  
 Full-Size     Half-Size     25×25     36×27

Output Type (输出模式)     CMOS     LVPECL     LVDS     HCSSL     Clipped Sine Wave     Sine Wave

Frequency Stability \_\_\_\_\_ ppm/ppb      Operating Temperature \_\_\_\_\_ °C  
 Supply Voltage \_\_\_\_\_ Vdc      Supply Current \_\_\_\_\_ mA  
 Rise/Fall Time \_\_\_\_\_ ns      Symmetry \_\_\_\_\_ %  
 Control Voltage \_\_\_\_\_ v      Linearity \_\_\_\_\_ %      Pullability \_\_\_\_\_ ppm





SJK founded in 1989, is a manufacturing-type enterprise of frequency control products. It owns independent brand SJK and complete product line including small SMD crystal oscillator, traditional DIP crystal and oscillator, high-end oscillator (including OSC, VCXO, TCXO, OCXO, VC-TCXO, LVDS/PECL output), SAW device, crystal filter (MCF) and other products.

The factory is fully reinforced and has passed ISO 9001, TS 16979, QC 080000, ISO 14001 and other system certifications. All products are conformed to RoHS standard. SJK products are widely used in communication, Network, automotive electronics, consumer electronics, industrial control, wearable device, medical electronics, security, smart home, robot and so on, which omatic production line, strong exploitation and after-sale technical teams, professional, timely and considerate customer service executives, who can provide you with high-quality products and services. Believe in us-SJK is the best. For more details about us, contact us today!



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