

深圳市维拓精电科技有限公司
WTL International Limited

APPROVAL SHEET

DESCRIPTION :	49SMD Crystal			
NOMINAL FREQ.:	12.000MHz			
WTL P/N:	WTL9M27605CH			
REVISION:	0			
DATE:	2019.02.18			
Customer	Customer P/N			
IBS Electronics Inc.	/			
Customer Signature	WTL			
	Approved by: <i>Xo Xo Lee</i>			
	Checked by: <i>Susan He</i>			
	Issued by: <i>Shengbiao</i>			
REVISION HISTORY				
Revised Page	Revision Content	Date	Ref. No.	Reviser



P/N: WTL9M27605CH

Resistance Welded HC-49/S Surface Mount Package



FEATURE

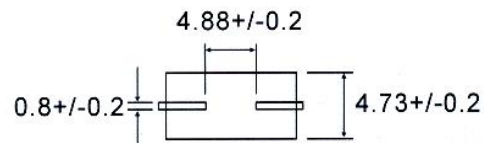
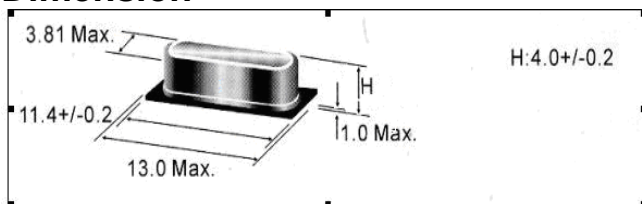
- Height 4.0mm, compact unit for surface mount
- Able to by means of a metal case and completely sealed high solution characteristics
- Copes with high density mounting and is the optimum for mass production



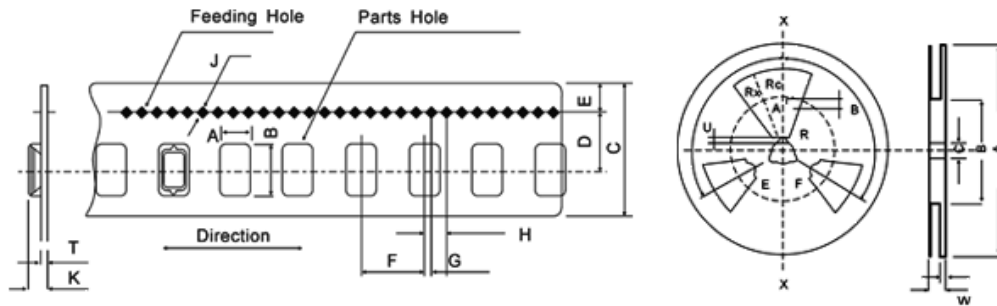
ELECTRICAL SPECIFICATIONS

Nominal frequency	12.000MHz
Oscillation mode	Fundamental
Operating temperature range	-20-+70°C
Storage temperature range	-40-+85°C
Frequency tolerance	± 50ppm
Freq. Temp characteristics	± 50ppm
Load capacitance	12pF
Equivalent series resistance(Ω)	50 ohm max
Parallel capacitance(Co)	7.0PF Max
Drive level	10~100 μW Typical
Insulation resistance	More than 500MΩ AT DC100V
Aging(at 25°C)	± 5ppm/year maximum

Dimension



Tape & Reel



Description		Code	Dimensions	
Flanges	Diameter	A	$\phi 330 \pm 2.0$	
	Thickness	t	2.4 ± 0.2	
	Width between Flanges	W	$+2.0$ $24.4 - 0$	
Flanges	Outline Diameter	B	$\phi 100 \pm 2.0$	
	Center Coreslit	Width	F	2.3 ± 1.0
		Depth	V	6.0 ± 1.0
		Position	Q	$120^\circ \pm 3.0^\circ$
	Spindle Diameter	C	$\phi 13.0 \pm 0.5$	
	Key Seats	Width	E	2.5
		Depth	U	5.0 ± 0.5
Position		Q	$120^\circ \pm 3^\circ$	
Fenestrate	Outline Radius	R _o	$R90 \pm 1.0$	
	Inline Radius	R _i	$R40 \pm 1.0$	
	Rounded Corners	R _c	$+2.0$ $R5 - 0$	
	Open Angle	R	$40^\circ \pm 2^\circ$	

Code	Dimension	Code	Dimension	Code	Dimension
A	5.0 ± 0.1	E	1.75 ± 0.1	J	$\phi 1.5 (+0.1, -0)$
B	15.0 ± 0.2	F	$8.0 \pm 0.1 / 12.0 \pm 0.1$	K	5.0 ± 0.1
C	24.0 ± 0.3	G	2.0 ± 0.1	T	5.0 ± 0.1
D	11.05 ± 0.1	H	4.0 ± 0.1		

P/N: WTL9M27605CH

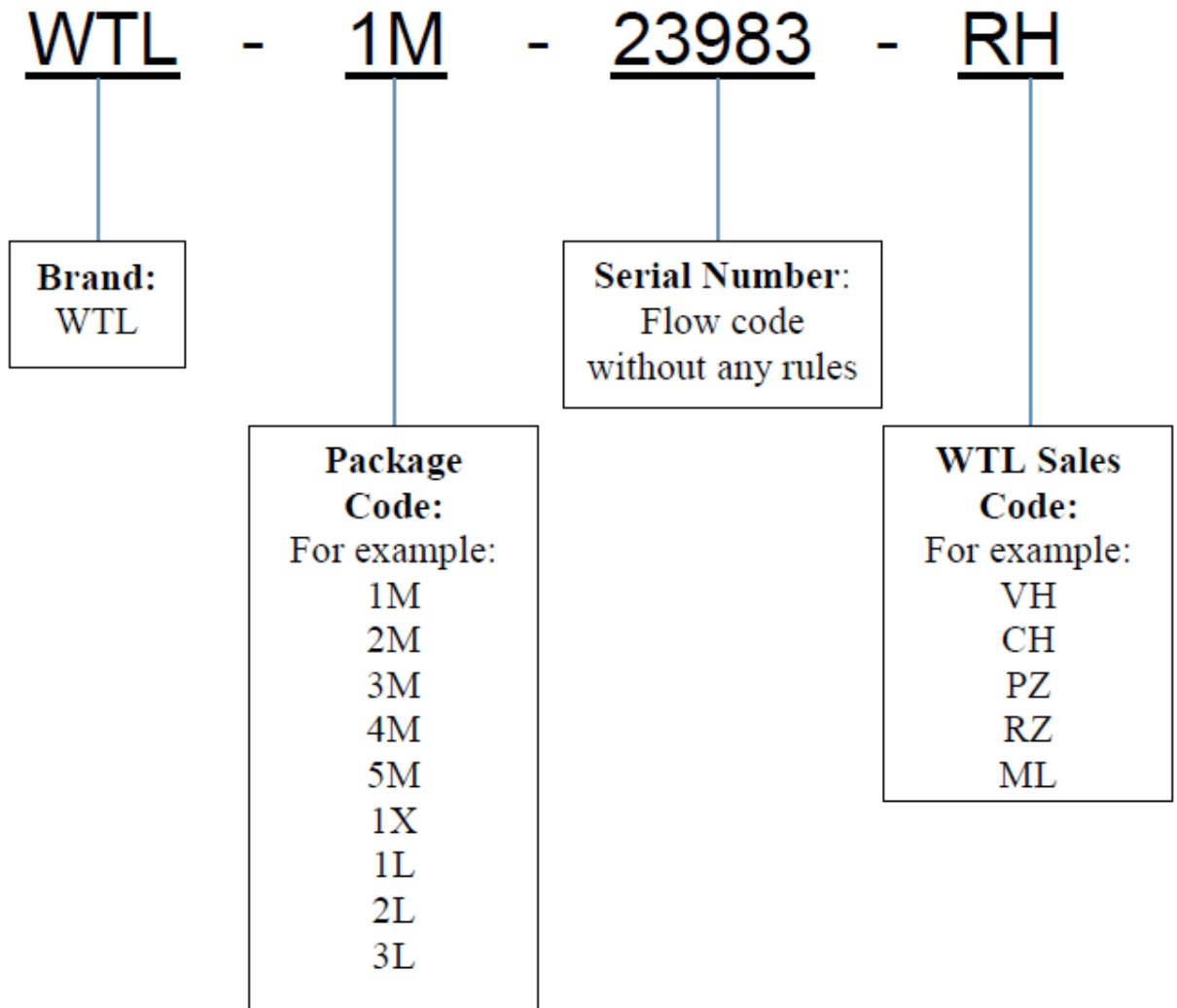
Resistance Welded HC-49/S Surface Mount Package



WTL Part Number System:

For example: WTL1M23983RH

[Instructions: for project management, WTL will trace back the part number to developer wherever it goes]



P/N: WTL9M27605CH

Resistance Welded HC-49/S Surface Mount Package



Marking Instruction:

[The date code was marked on the crystal body, which will be easily traced back in case of quality issue.]

Quartz Crystal			Watch crystal			Crystal oscillator		
Series	Package Dimension	Marking style	Series	Package Dimension	Marking style	Series	Package Dimension	Marking style
TX1	2.0*1.6mm 4pads	WTL A2 12.000 Instructions: WTL= WTL brand A= Week code * 2= Year code * 12.000=first 6 codes of frequency	WX1	3.2*1.5mm 2pads	W32A2 Instructions: W=WTL brand 32= first 2 codes of frequency A= week code * 2= year code *	LO2	2.5*2.0mm	WTL A2 .12.000 Instructions: W=WTL brand A= Week code * 2= Year code * .= oscillator code 12.000=first 6 codes of frequency
TX2	2.5*2.0mm 4pads		WX2	2*6mm,3*8mm		LO3	3.2*2.5mm	
TX3	3.2*2.5mm 4pads		WX3	3.8*8.0mm SMD		LO5	5.0*3.2mm	
TX4	4.0*2.5mm 4pads		WX4	6.9*1.4mm SMD		LO7	7.0*5.0mm	
TX5	5.0*3.2mm 4pads		WX8	2*6mm SMD		LO1	Full/half size	
TX6	6.0*3.5mm 4pads					LV7	7.0*5.0mm VCXO	
TX7	7.0*5.0mm 4pads					LV1	Full/half size VCXO	
TG8	8.0*4.5mm 2pads GLASS					WT1	TCXO	
TG7	7.0*5.0mm 2pads GLASS							
TG6	6.0*3.5mm 2pads GLASS							
TG5	5.0*3.2mm 2pads							
TS7	7.0*5.0mm 2pads							
TS6	6.0*3.5mm 2pads							
TS5	5.0*3.2mm 2pads							
WX5	HC49/U							
WX6	HC49/S							
WX7	HC49/SMD							
WF1	MCF							

* Week code + year code , please refer to WTL Date Code Instructions.

Version 1
2009-1-1