




**SPECIFICATION SHEET**

<b>SPECIFICATION SHEET NO.</b>	Q0531 - XG12M00000L418
<b>DATE</b>	MAY 31, 2023
<b>REVISION</b>	A0
<b>DESCRIPTION</b>	MHz DIP Crystal, L7.9*W3.2*H8.2mm, UM-1 Type, 2 Pins, CA Series 12.000MHz, +/-30ppm, 18pF, Stability +/-50ppm @Operating Temperature Range -40°C ~+85°C, ESR 50 ohm Max, Reflow Profile Condition 260 °C Max. RoHS/RoHS III compliant Package in Bulk
<b>CUSTOMER</b>	
<b>CUSTOMER PART NUMBER</b>	
<b>CROSS REF. PART NUMBER</b>	
<b>ORIGINAL PART NUMBER</b>	TGS CA 12M0A30-18-50-40-50 BLF
<b>PART CODE</b>	XG12M00000L418

<b>VENDOR APPROVE</b>			
Issued/Checked/Approved			
DATE: MAY 31, 2023			

<b>CUSTOMER APPROVE</b>	
DATE:	
5/31/2023	

**DIP MHZ CRYSTAL UM-1 TYPE 2 PINS CA SERIES**

**MAIN FEATURE**

- MHz DIP Crystal, UM-1 Type, L7.9\*W3.2\*H8.2mm, 2pins, CA SERIES
- Low Cost, High precision, High frequency stability
- Cross More Competitors Part
- RoHS/RoHS III compliant



**APPLICATION**

- Measurement Instrument
- Communication Electronics

**PART CODE GUIDE**

**RFQ**

[Request For Quotation](#)

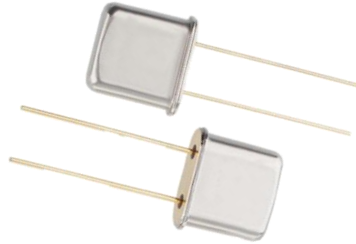
<b>XG</b>	<b>12M00000</b>	<b>L</b>	<b>418</b>
1	2	3	4

- 1) XG: Part family Code for MHz DIP Crystal, L7.9\*W3.2\*H8.2mm, UM-1 Type, 2 Pins, CA series
- 2) 12M00000: Frequency range code for 12.000MHz
- 3) L: DIP type, Bulk Package
- 4) 418: Specification code for original part no. **TGS CA 12M0A30-18-50-40-50 BLF**

**DIP MHZ CRYSTAL UM-1 TYPE 2 PINS CA SERIES**

**DIMENSION (Unit: mm)**

Image for  
reference

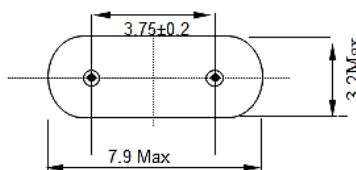
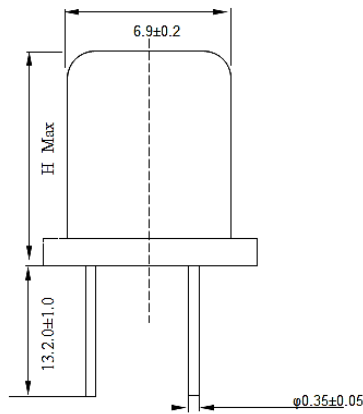


**CA series**

L7.9\*W3.2\*H8.2mm,  
UM-1 Type, H: 8.2mm

**Marking**

Frequency Range  
or Internal control code



**DIP MHZ CRYSTAL UM-1 TYPE 2 PINS CA SERIES**
**ELECTRICAL PARAMETERS**

Parameter	Part No. Symbol	Units	Value			Condition
			Min.	Typical	Max.	
Original Manufacturer	TGS		TGS Crystals			
Holder Type	CA		MHz DIP Crystal, UM-1 Type L7.9*W3.2*H8.2mm, 2 Pins			
Frequency Range	12M0	MHz	12.000			
Mode of Oscillation	A		AT Fundamental			
Frequency Tolerance	30	ppm	-30		+30	@25°C
Load Capacitance	-18	pF	18			
Stability over Operation Temperature	-50	ppm	-50		+50	
Operation Temperature	-40	°C	-40		+85	
Storage Temperature		°C	-55		+125	
Equivalent Series Resistance (ESR)	50	Ω			50	
Drive Level		μW			100	
Shunt Capacitance (C0)		pF	0		7.0	
Motional Capacitance (C1)		fF	N/A			
DLD2		Ω	N/A			
FLD2		ppm	N/A			
RDL2		Ω	N/A			
SPDB		dB	N/A			
Aging		ppm/year			±5	@1 <sup>st</sup> year
Insulation Resistance		MΩ	500			@100VDC ± 15Vdc
Others	Package	B	Bulk			
	RoHS Status	LF	RoHS III compliant			
	Add Value		N/A			
	Internal Control Code *		N/A			

Note: Original Part Number: TGS CA 12M0A30-18-50-40-50 BLF

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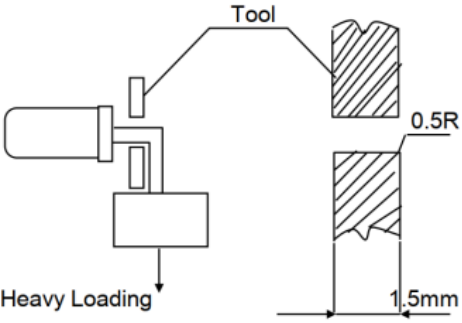
**DIP MHZ CRYSTAL UM-1 TYPE 2 PINS CA SERIES**

**RELIABILITY**

Test Items	Test Method And Conditions	Specification No:
<b>Shock</b>	Orient the sample in any attitude and drop in three times form a height of 75 cm onto a hardwood board with a thickness of 3 cm	A
<b>Vibration</b>	Subject the sample to 1--2 minute cycles of frequencies of 10 to 55Hz and amplitudes of 1.5mm fo two hours in each of the x, y and z directions or for 6 hours in total	A
<b>Tesile strength of terminal</b>	apply a 1.5kg tensile load to each terminal and sustain it for 30±5 seconds	A.C
<b>Solderability</b>	Dip terminals in a 230±5°C solder bath for 5±0.5 seconds the solder shall leave an undipped terminal length of 2mm at their base	D
<b>Resistance to Soldering heat</b>	Dip the terminals in a 260±°C solder bath for 10±0.5 seconds the solder shall leave an undipped terminal length of 2mm at their base	A
<b>Leakage test</b>	Take measurements with a heliun leakage	E
<b>Thermal shock</b>	Subject the sample to 5 temperature variation cycles at -40°C for 30 minutes and +100°C for the next 30 minutes in each cycle	A
<b>Cold</b>	Expose the sample in an inoperative mode to 500 hours in a -40°C environment	A

**DIP MHZ CRYSTAL UM-1 TYPE 2 PINS CA SERIES**

**RELIABILITY**

Test Items	Test Method And Conditions	Specification No:
<b>Cold</b>	Expose the sample in an inoperative mode to 500 hours in a -40°C environment	A
<b>Dry heat</b>	Expose the sample in an inoperative mode to 500 hours of a +85°C environment	B
<b>Damp heat</b>	Expose the sample in an inoperative mode to 500 hours of a +65°C to 95% RH environment	B
<b>Bending Strength of terminal</b>	<p>Apply a 500g load to one of the terminals and after tilting the main unit resonator for 90°, restore to its original attitude .Then tilt it in an opposite direction for 90°, and restore to its original attitude</p> 	A.C

**DIP MHZ CRYSTAL UM-1 TYPE 2 PINS CA SERIES**

**SPECIFICATIONS**

NO	SPECIFICATIONS REQUESTED
A	Any variation between the pre-and post-test frequencies shall remain within $\pm 5$ ppm , The post-test equivalent series resistance shall remain within ics specified tolerance range
B	Any variation between the pre-and post-test frequencies shall remain within $\pm 10$ ppm , The post-test equivalent series resistance shall remain within ics specified tolerance range
C	After each test, no visible damage shall be manifested, nor shall the hermetic seal break down
D	At least 90% of each dipped area shall be covered by fresh solder
E	The post-test leakage factor shall be $10^{-7}$ mbar.1/sec max

**DISCLAIMER**

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