

### **SPECIFICATION SHEET**

SPECIFICATION SHEET NO.	Q0301- XB16M93440S416
DATE	March 01, 2023
REVISION	AO
DESCRIPITION	MHz SMD Crystal, Seam Seal, L7.0*W5.0*H1.1mm, 4 Pads, CM75 series 16.9344MHz, Tolerance +/-30ppm, Load Capacitor 16pF, Frequency stability +/-30ppm @Operating Temp. Range -40°C ~+85°C, ESR 45 ohm Max, Reflow Profile Condition 260 °C Max. Tape/Reel, 1000pcs/Reel RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	TGS CM75 16M9344A30-16-30-40-45TLF
PART CODE	XB16M93440S416

#### **VENDOR APPROVE**

Issued/Checked/Approved







DATE: March 01, 2023

CUST	OMER	APPR	OVE

DATE:

03/01/2023



### **SMD CRYSTAL 7050 TYPE 4 PADS**

#### MAIN FEATURE





- SMD Crystal, Seam Seal, L7.0\*W5.0\*H1.1mm, 4 pads
- Low cost, High precision, High frequency stability
- Reflow Profile Condition 260 °C Max.
- Cross more competitors part
- RoHS/RoHS III compliant

#### **APPLICATION**

- Bluetooth, wireless communication set
- Communication Electronics

#### **PART CODE GUIDE**



ХВ	16M93440	S	416
1	2	3	4

- 1) XB: Part family Code for SMD Crystal, Seam Seal, L7.0\*W5.0\*H1.1mm, 4 pads (CM75)
- 2) 16M93440: Frequency range code for 16.9344MHz
- 3) S: SMD type, Package Tape/Reel, 1000pcs/Reel
- 4) 416: Specification code for original part No.: TGS CM75 16M9344A30-16-30-40-45TLF

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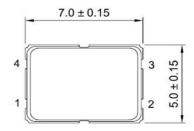
# **SMD CRYSTAL 7050 TYPE 4 PADS**

#### **DIMENSION (Unit: mm)**

#### Image for reference



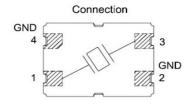
#### CM75



### Marking

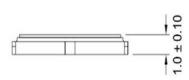
standard

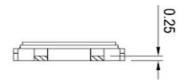
# 4.6 2.54



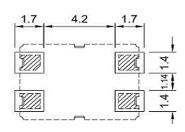
#### Connection

- #1 Crystal #2 Ground
- #3 Crystal #4 Ground





#### **Recommend Pad Layout**





### **SMD CRYSTAL 7050 TYPE 4 PADS**

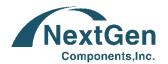
#### **ELECTRICAL PARAMETERS**

Parameter		Part No. Symbol	Units	Value		Condition	
		Symbol		Min.	Typical	Max.	
Original	Manufacturer	TGS		TGS	Crystals		
Holder T	уре	CM75	SMD Crysta	l, Seam Seal,	L7.0*W5.0*H1.1	mm, 4 pads	
Frequen	cy Range	16M9344	MHz		16.9344		
Mode of	Oscillation	А			AT Fundamenta	al	
Frequen	cy Tolerance	30	ppm	-30		+30	@25°C
Load Cap	oacitance	-16	pF		16		
Stability Operation	over on Temperance	-30	ppm	-30		+30	
Operation	on Temperance	-40	°C	-40		+85	
Storage '	Temperance		°C	-55		+125	
Equivale Resistan	nt Series ce (ESR)	-45	Ω			45	
Drive Le	vel		μW			300	
Shunt Ca	apacitance (CO)		pF	0 7.0			
Motiona (C1)	Il Capacitance		fF	N/A			
DLD2			Ω	N/A			
FLD2			ppm	N/A			
RDL2			Ω	N/A			
SPDB			dB	N/A			
Aging			ppm/year			±3	@1 <sup>st</sup> year
Insulatio	on Resistance		ΜΩ	500			@100VDC ± 15VDC
	Package T Tape/Reel						
	RoHS Status	LF	RoHS III compliant				
Others Add Value N/A		N/A					
	Internal Control Code <mark>*</mark>			N/A			

Note: 1) Original Part Number: TGS CM75 16M9344A30-16-30-40-45TLF

2) \*Internal Control Code- 2 letter or digits; Blank: N/A

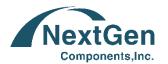
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# SMD CRYSTAL 7050 TYPE 4 PADS

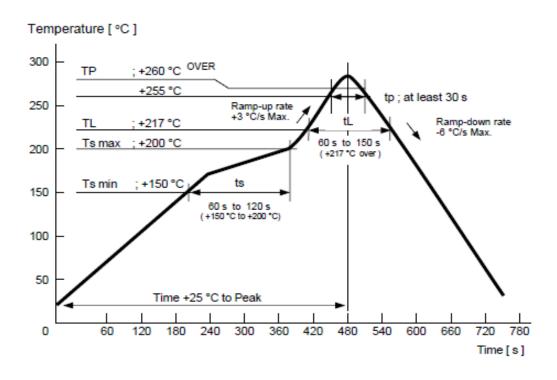
#### **MECHANICAL PERFORMANCE**

Item	Condition	Standard
Drop characteristics  Free drop from 75cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.)		Frequency change: ≤5ppm Rr as specification
Shake characteristics	Shake frequency 10~55Hz, cyc1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
Airproof characteristics	Put crystal into the pressure cabin with alcohol, keep pressure 0.4~0.5mpa 10 minutes, then take out and blow for 5 minutes	IR≥500MΩ
Weld characteristics	260±5°C, 3 seconds	90% exhibit tin ok
Humidity characteristics	umidity characteristics $+40\pm2^{\circ}$ C & 90%~95% R.H. 250 hours	
Low temperature characteristics	-30 $\pm$ 2°C, 250 hours, put in room temperature, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
High temperature characteristics	+85 $\pm$ 2°C, 250 hours, put in room temperature, test after 1 hours.	Frequency change: ≤5ppm Rr as specification
Temperature cycling	-30 $\pm$ 3°C/30 $\pm$ 3 min~+85 $\pm$ 2°C/30 $\pm$ 3min, 5 cycles	Frequency change: ≤5ppm Rr as specification



### **SMD CRYSTAL 7050 TYPE 4 PADS**

#### **SUGGESTED REFLOW PROFILE (For Reference Only)**

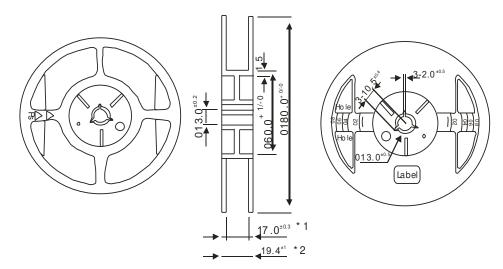


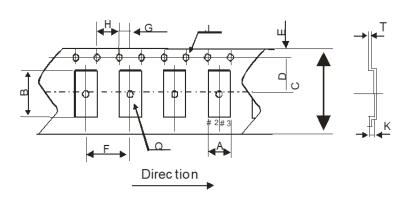
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### **SMD CRYSTAL 7050 TYPE 4 PADS**

#### TAPE/REEL (Unit: mm)

All Devices are packed in accordance with EIA standard RS-481-2 and specifications., 1000pcs/Reel





5.4 <sup>±01</sup>	
7.4 <sup>±0.1</sup>	
16.0 <sup>±0.2</sup>	
7.5 <sup>±0.1</sup>	
1.75 <sup>±0.1</sup>	
8.0 <sup>±0.1</sup>	
2.0 <sup>±0.1</sup>	
4.0 <sup>±0.1</sup>	
1.55 <sup>±0.05</sup>	
1.4 <sup>±0.1</sup>	
1.6+0.1/0	
0.3 <sup>±0.05</sup>	

Item		Empty Space	
Tapa Leader	Cover Tape	Min.500mm	
	Empty Pockets	Min.20 pockets	
Tape Trailer	Cover Tape	Min.0mm	
	Empty Pockets	Min.40mm	

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