# IoT OPTIMIZED LOW PROFILE QUARTZ CRYSTAL

# ABM12-117-27.120MHz

1.6 x 1.2 x 0.40 mm (Pb) RoHS/RoHS II Compliant

ABM12

MSL = N/A: NOT APPLICABLE <sup>(See Note #1)</sup>

#### **FEATURES**

- Optimized for low power consumption, wearables, and IoT applications
- Guaranteed low  $80\Omega$  ESR ensures operation in power sensitive solutions
- 0.40mm max height ideally suited for height constrained designs
- Seam sealed for longterm reliability

## **APPLICATIONS**

- Wearables
- Internet of Things (IoT)
- Bluetooth/Bluetooth Low Energy (BLE)
- Wireless modules
- Machine-to-machine (M2M) connectivity
- Ultra-low power MCU
- Near Field Communication (NFC)
- ISM Band

PARAMETERS	MINIMUM	TYPICAL	MAXIMUM	UNITS	NOTES
Frequency		27.120		MHz	
Operation Mode		Fundamental			
Operating Temperature	-20		+70	°C	
Storage Temperature	-40		+125	°C	
Frequency Tolerance @+25°C	-10		+10	ppm	See Note#2
Frequency Stability over the Operating Temperature ( ref. to +25°C)	-10		+10	ppm	See Note#3
Equivalent series resistance (R1)			80	Ω	
Shunt capacitance (C0)			2	pF	
Load capacitance (CL)		8		pF	
Drive Level		10	100	μW	
Aging@25°C±3°C			±3	ppm	First year
Insulation Resistance	500			ΜΩ	$(a) 100 \text{Vdc} \pm 15 \text{V}$

## STANDARD SPECIFICATIONS

Note#2:

Note#1: Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive

: Referenced to crystal resonant frequency, into an oscillator loop effective load of 8pF

Note#3:

Referenced to the measured frequency at  $25^{\circ}C \pm 3^{\circ}C$ , into an oscillator loop effective load of 8pF



5101 Hidden Creek Lane Spicewood TX 78669 Phone: 512-371-6159 | Fax: 512-351-8858 For terms and conditions of sale visit: www.abracon.com

#### **REVISED:** 06/21/2016

ABRACON IS ISO9001-2008 CERTIFIED

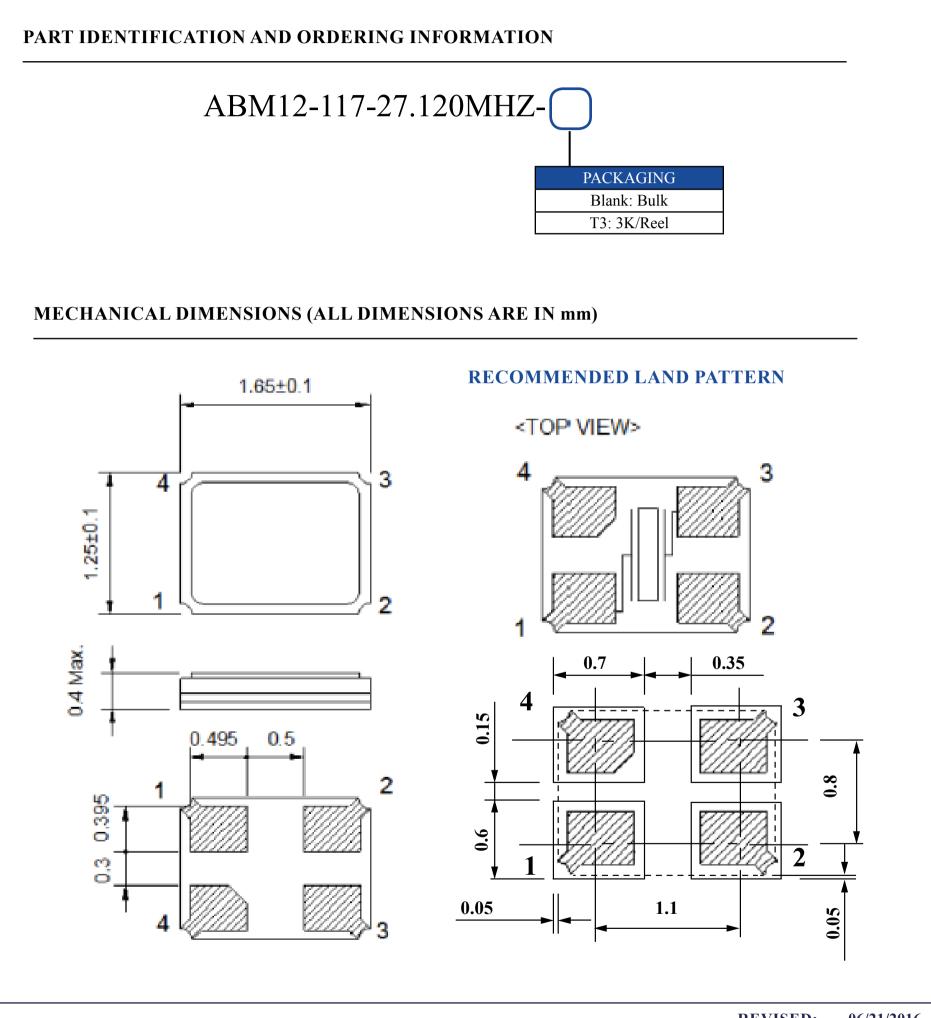
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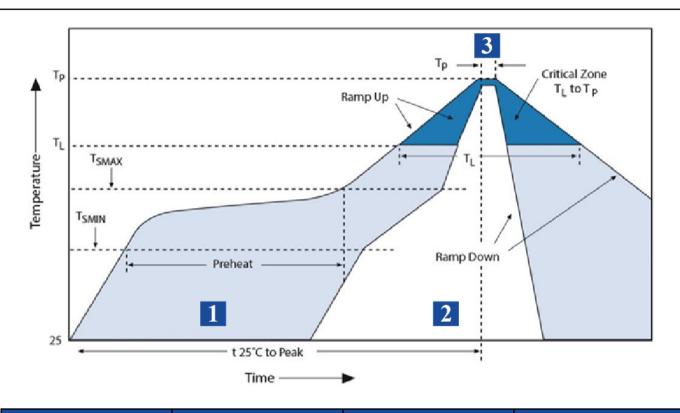
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#### **REFLOW PROFILE**



Zone	Description	Temperature	Time
1	Preheat	T <sub>smin</sub> - T <sub>smax</sub> 160°C~180°C	120 sec.
2	Reflow	T <sub>L</sub> 60°C	60 sec.
3	Peak Heat	T <sub>P</sub> 260°C	10 sec. MAX

## PACKAGING

### **T3: 3000PCS/REEL**

