DIODES INCORPORATED

A Product Line of
Diodes Incorporated

PERICOM

SPECIFICATION FOR APPROVAL

CUSTOMER

NOMINAL FREQUENCY 32.000000 MHz

PRODUCT TYPE **TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL**

SPEC. NO. (P/N) FL3200084Q

CUSTOMER P/N

ISSUE DATE February 23, 2018

VERSION B

APPROVED	PREPARED	QA
Brenda	Kelly	

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***Pb-free**

***RoHS Compliant**

***HF-Halogen Free**

***REACH Compliant**

***AEC-Q200 Compliant**

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

FL3200084Q

VER. B 23-Feb-18

VERSION HISTORY

Version No.	Version Date	Description	Notes
A	May.6,2016	Initial Release	
B	Feb.23,2018	Updated logo	

TYPE FL 3.2x2.5 SEAM SEALED CRYSTAL

FL3200084Q

VER. B 23-Feb-18

ELECTRICAL SPECIFICATIONS

Item	Symbol	Specifications	Units	Notes
Nominal Frequency	Fn	32.000000	MHz	
Mode of Oscillation	MO	AT Cut-Fundamental		
Calibration Load Capacitance	CL	10	pF	
Calibration Tolerance	FL	±10	ppm	at 25℃±3℃
Operating Temperature Range	TR	-40 to +125	℃	
Frequency Stability (Frequency Deviation over the Operating Temperature Range)	F/T	±50	ppm	Reference to the Frequency at 25℃
Operating Drive Level		10	μW	
Maximum Drive Level		100	μW	
Equivalent Series Resistance	ESR	40	Ω	Max
Shunt Capacitance	C0	5	pF	Max
Aging at 25℃		±3	ppm	Max, 1st year
Storage Temperature		-55 to +125	℃	
Insulation Resistance		500	MΩ	Min
※ This product doesn't include harmful substance that stipulated by SONY SS-00259 Level 1 and S-AT2-001 Level 1 standard. RoHS Compliant (Pb - Free).				

AEC-Q200 RELIABILITY TEST SPECIFICATIONS:

1. Initial

1.1 Physical Dimensions: JESD22, Method JB1-100

1.2 External Visual: MIL-STD-883, Method 2009

1.3 Freq. Vs. Temperature: Per Specification/Datasheet

2. Mechanical

2.1 Mechanical Shock: MIL-STD-202 Method 213

2.2 Vibration: MIL-STD-202 Method 204

2.3 Solderability: J-STD-002

2.4 Board Flex: AEC Q200-005

2.5 Terminal Strength (SMD): AEC Q200-006

3.Environmental

3.1 Temp Cycle: JESD22, Method JA-104

3.2 Resistance to Solder Heat: MIL-STD-202 Method 210

3.3 High Temperature Operating Life: MIL-STD-202, Method 108

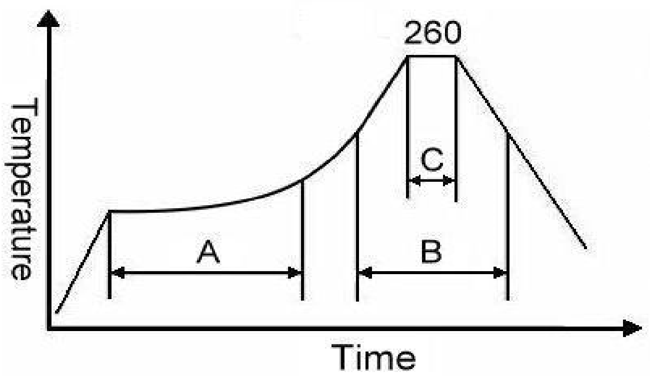
3.4 High Temp Exposure: MIL-STD-202, Method 108

3.5 High Temp & High Humidity: MIL-STD-202, Method 103

3.6 Thermal Shock: MIL-STD-202, Method 107

SUGGESTED IR REFLOW PROFILE

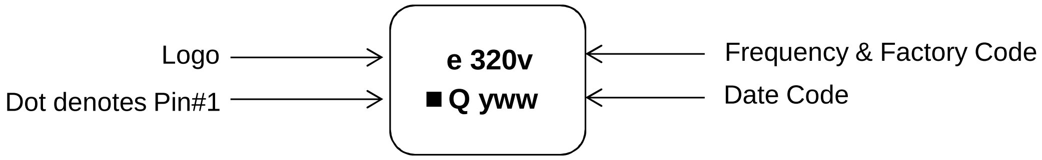
*As per IPC-JEDEC J-STD-020D

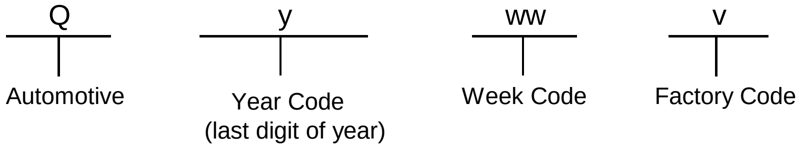


Note:

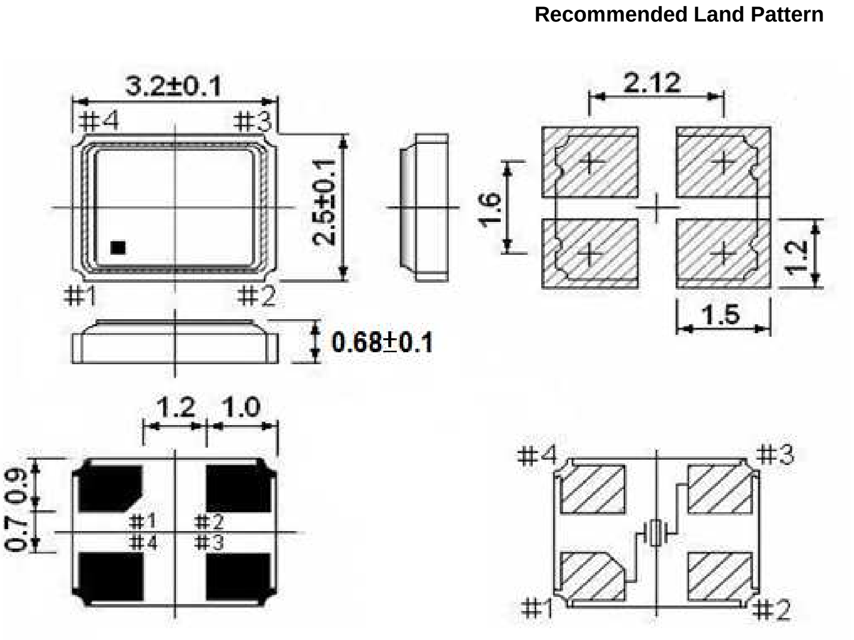
	Stage	Temperature	Time
A	Preheat	150~200°C	60~120 Sec
B	Primary Heat	217°C	60~150 Sec
C	Peak	260°C	10 Sec

MARKING





MECHANICAL DRAWINGS (Scale: None. Dimensions are in mm.)



Bottom View

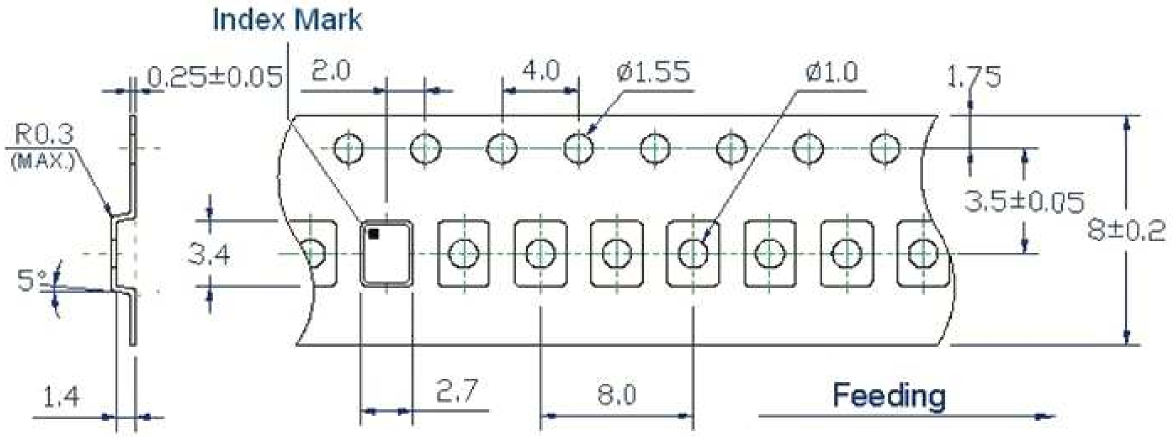
Top View

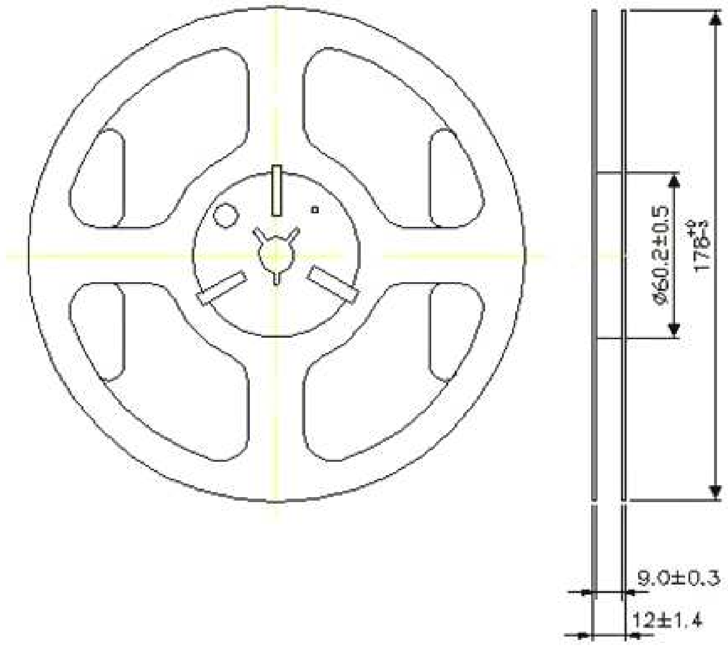
** Recommended - Pin 1 & 3 : CRYSTAL
Pin 2 & 4 : GND

Notes:

1. Package drawings are for reference only, and the appearances of objects may vary.
   Actual packages are based on the real product.
2. The marking dot denotes Pin#1.
3. The position and shape of the chamfer pin may vary and are based on the real product.

Tape & Reel

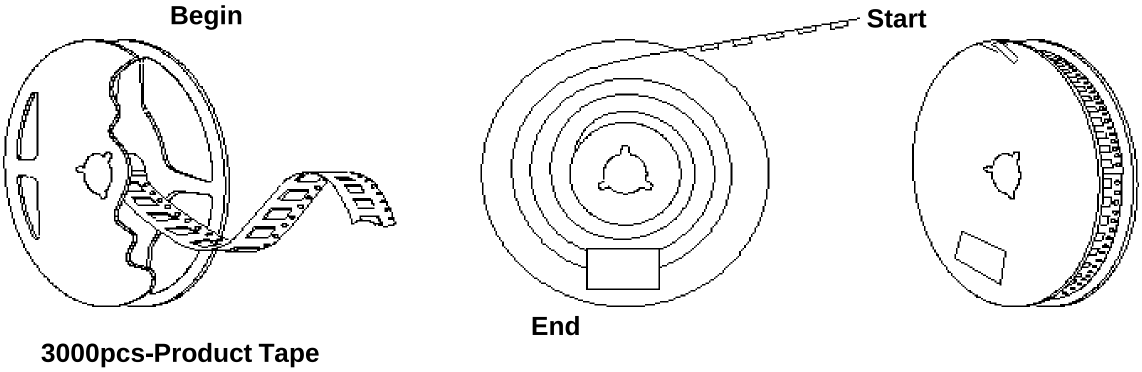


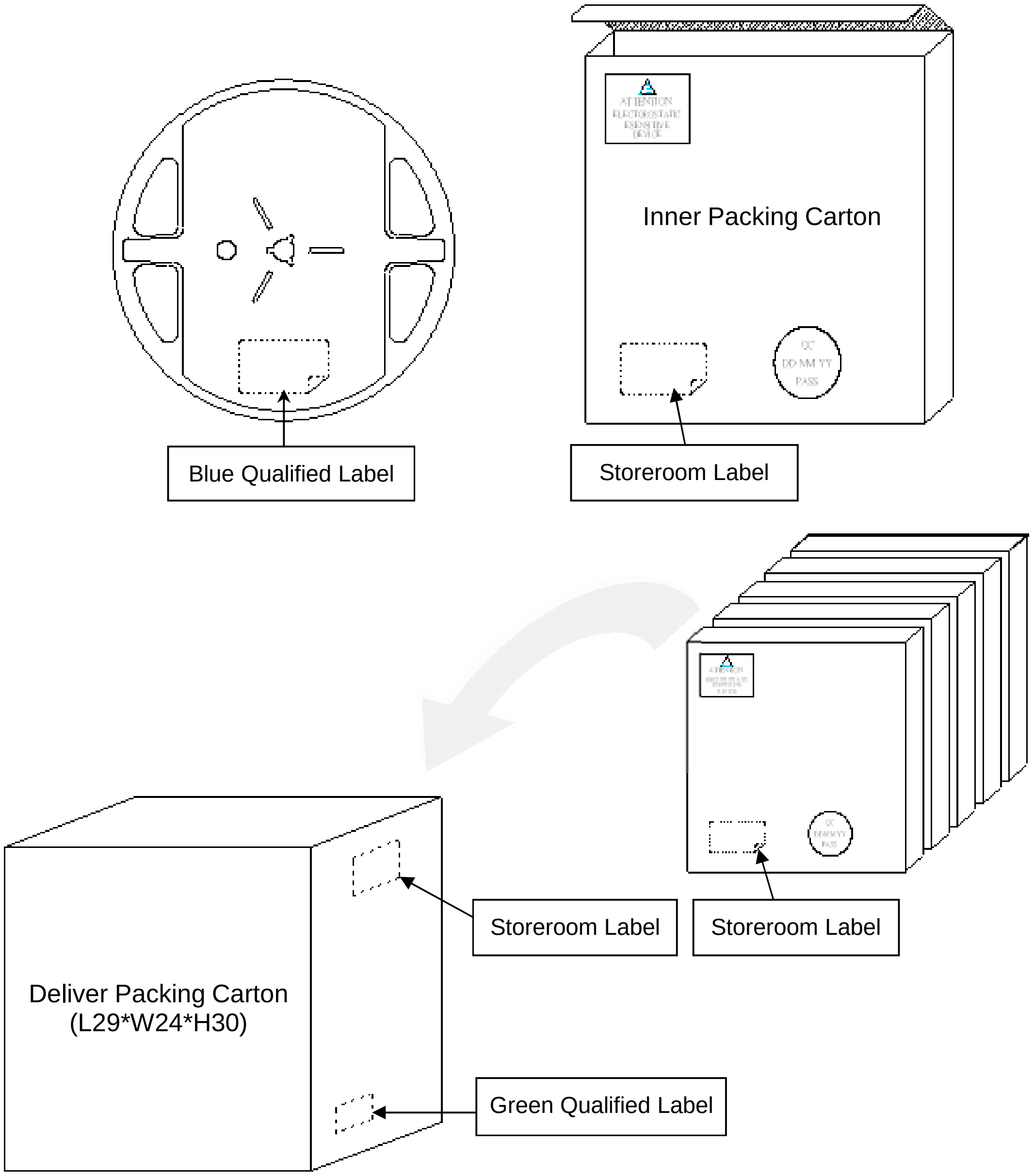


1. 230mm minimum leafer which consist of carrier and/or tape followed by a minimum of 160mm of empty carrier tape sealed with cover tape.

2. 160mm minimum trailer of empty carrier tape sealed with cover tape.

PACKING


Begin
Start
End
3000pcs-Product Tape


ATTENTION
ELECTROSTATIC
SENSITIVE
DEVICE
Inner Packing Carton
QC
DD MM YY
PASS
Blue Qualified Label
Storeroom Label
Storeroom Label
Storeroom Label
Deliver Packing Carton
(L29*W24*H30)
Green Qualified Label