

SPECIFICATION

| | | |
|--------------|---|--|
| Part No. | : | DXP.01.A |
| Product Name | : | SMD L1/L2 SAW Diplexer For GPS/GALILEO L1, GLONASS L2 & BeiDou B2 |
| Features | : | L2 1222.7625 / L1 1575.42MHz SAW Diplexer SMT Direct Mount Compact Size 5*5*1.7mm Low Insertion Loss In band High Isolation Port to Port RoHS Compliant |



1. Introduction

The Taoglas DXP.01.A is an advanced compact SAW diplexer for use in any navigation system application using the GPS/GALILEO L1, GLONASS L2 and BeiDou B2 bands.

The diplexer is designed to function as both a bandpass filter for each band and to either split one path into two or to combine both bands back into one RF feed. For example, a customer who wanted to use passive dual band antenna elements would need to implement a diplexer in some cases to split both bands out into separate paths. It is also designed to isolate and reject any unwanted GPS/GALILEO signals from getting to the application port.

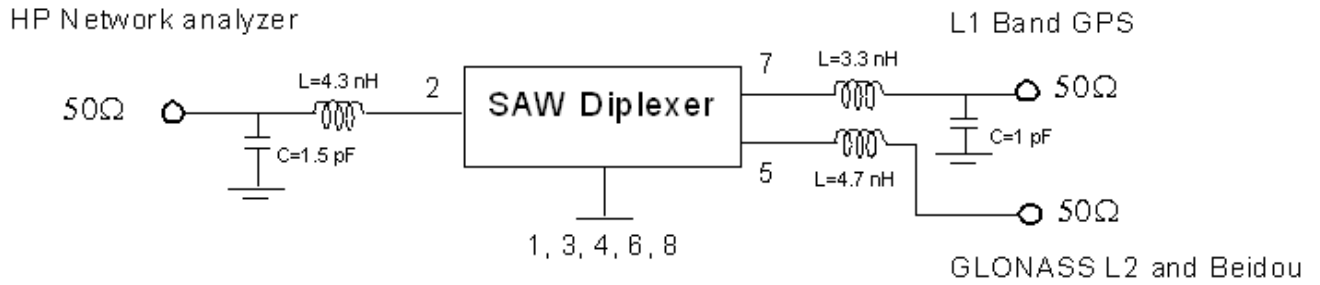
It is housed in a compact 5*5*1.7mm over-molded laminate package and is easy to integrate using SMT process mounting directly onto the target PCB.

Contact your regional Taoglas sales office for more information or support.

2. Specification

| L1 Band GPS/GALILEO | | | |
|---|---------------|-----------|------|
| | Min. | Typ. | Max. |
| Center Frequency (MHz) | - | 1575.42 | - |
| Insertion Loss (dB) | - | 3.3 | 3.8 |
| Amplitude Ripple (dB) | - | 0.1 | 1.0 |
| Return Loss (dB) | - | -12 | -8.5 |
| Attenuation (Reference level from 0dB) | | | |
| 824 ~ 960 (MHz) | 25 | 47 | - |
| 1500 ~ 1525.42 (MHz) | 8 | 19 | - |
| 1625.42 ~ 1650 (MHz) | 8 | 16 | - |
| 1710 ~ 2170 (MHz) | 25 | 34 | - |
| L2 Band GLONASS and B2 Band BeiDou | | | |
| | Min. | Typ. | Max. |
| Center frequency (MHz) | - | 1222.7625 | - |
| Insertion Loss (dB) | - | 4.1 | 4.8 |
| Amplitude Ripple (dB) | - | 0.9 | 1.8 |
| Return Loss (dB) | - | -12 | 8.5 |
| Attenuation (Reference level from 0dB) | | | |
| 464 ~ 600 (MHz) | 25 | 32 | - |
| 1110 ~ 1130 (MHz) | 16 | 23 | - |
| 1330 ~ 1450 (MHz) | 28 | 37 | - |
| 1500 ~ 1820 (MHz) | 25 | 30 | - |
| L1 Band GPS/GALILEO, L2 Band GLONASS and B2 Band BeiDou | | | |
| | Min. | Typ. | Max. |
| Isolation (1196.9~1248.625MHz) | 22 | 36 | - |
| Isolation (1574.22~1576.62 dB) | 22 | 33 | - |
| Environmental | | | |
| Operating Temperature | -40°C to 85°C | | |
| Storage Temperature | -40°C to 85°C | | |
| Input power Level | 10 dBm | | |
| DC Voltage | 3 V | | |

3. Measurement circuit

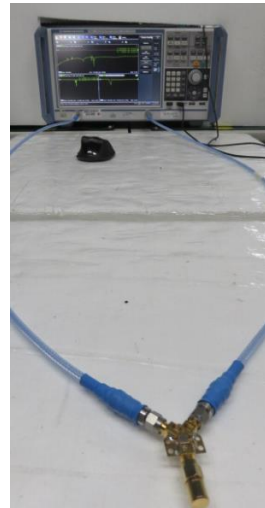


3.1 Test setup

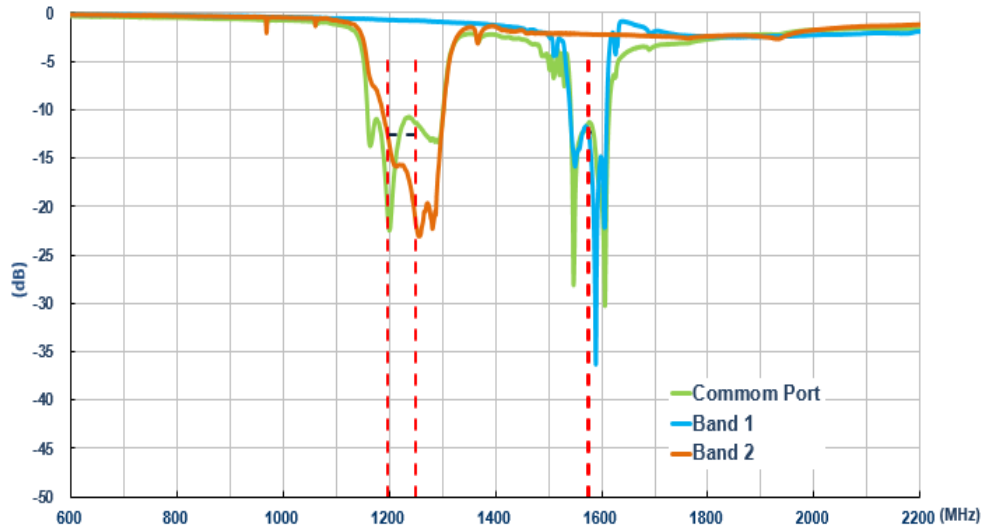
Band 1 (L1) **Band 2(L2/L5)**



Common Port

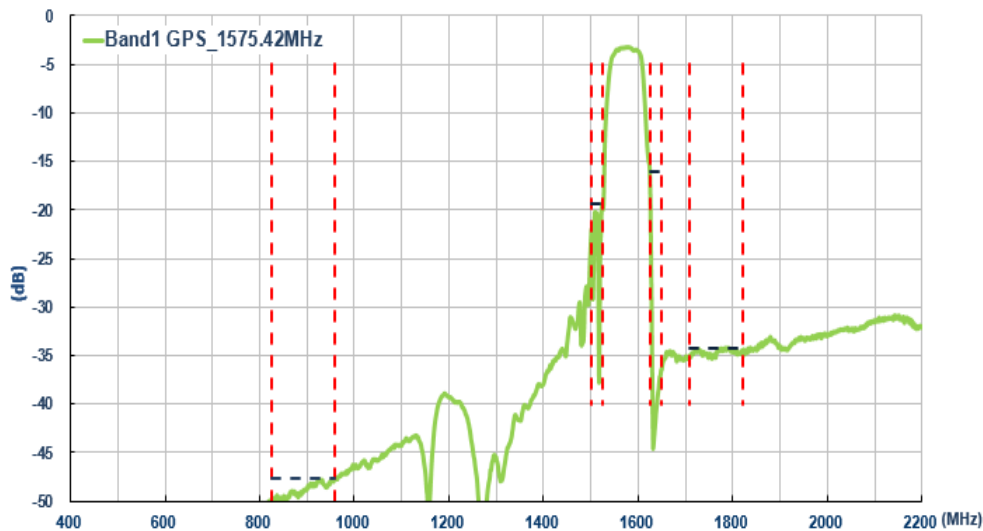


3.2 S-Parameter



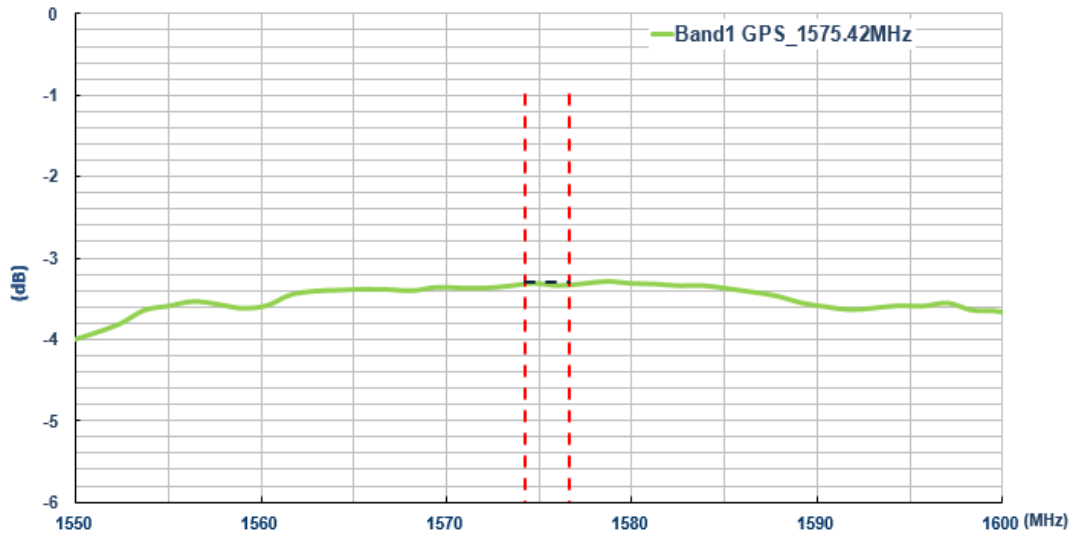
| Return Loss (dB) | |
|-------------------------------------|-------------------------------------|
| Band 1 1574.22~1576.62MHz | Band 2 1196.9~1248.625MHz |
| <-12.3 | <12.6 |

3.3. Common Port to Band 1 Port _ 1575.42MHz Attenuation



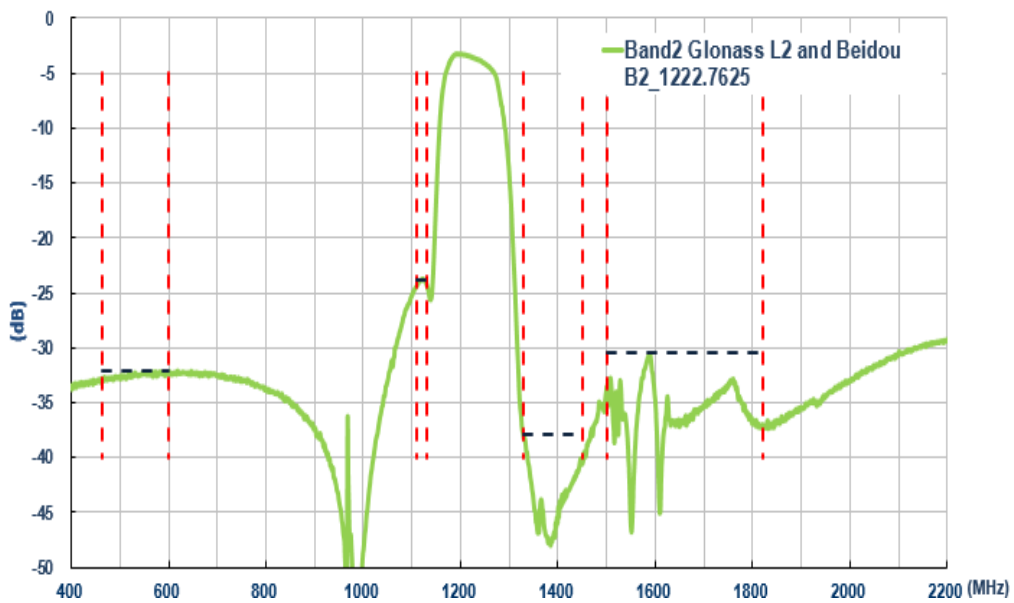
| Attenuation (dB) | | | |
|-------------------|------------------------|------------------------|---------------------|
| 824~960MHz | 1500~1525.42MHz | 1625.42~1650MHz | 1710~1820MHz |
| <-47.6 | <-19.4 | <-16.1 | <-34.2 |

3.4. Common Port to Band 1 Port _ 1575.42MHz Insertion Loss



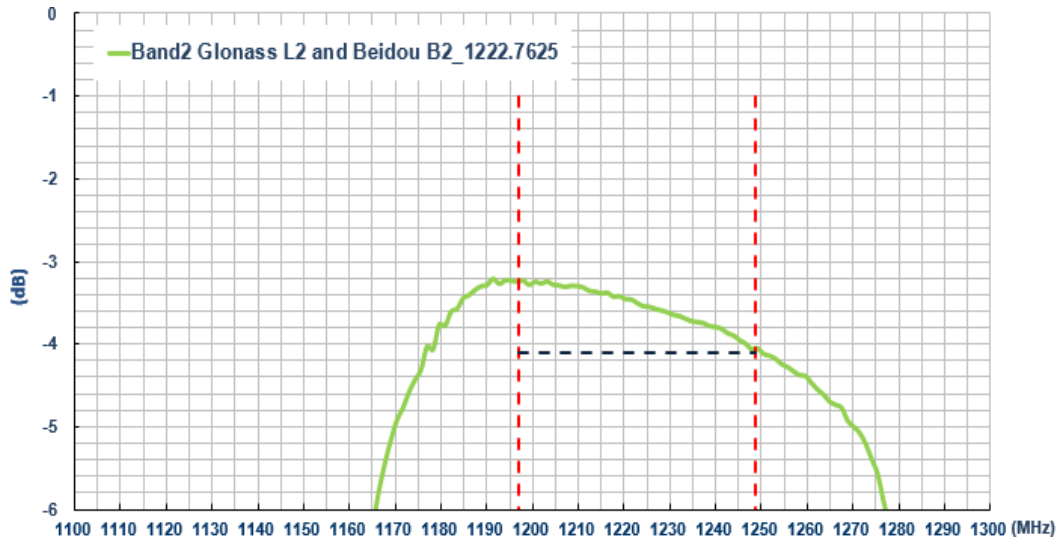
| Insertion Loss(dB) |
|--------------------|
| 1574.22~1576.62MHz |
| > -3.3 |

3.5. Common Port to Band 1 Port _1222.7625MHz Attenuation



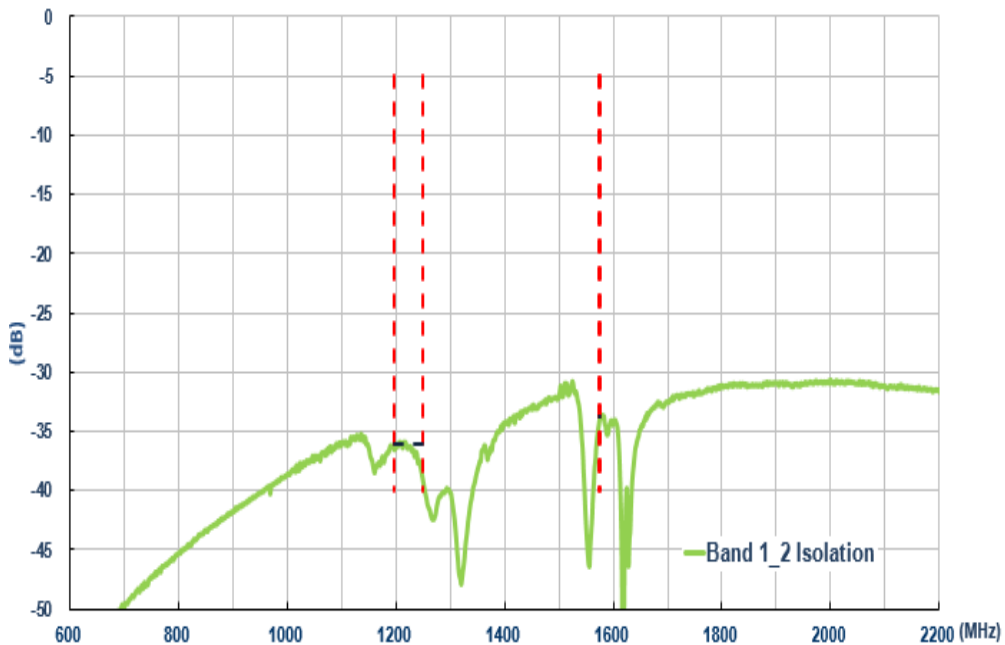
| Attenuation (dB) | | | |
|-------------------|---------------------|---------------------|---------------------|
| 464~600MHz | 1110~1130MHz | 1330~1450MHz | 1500~1820MHz |
| <-32.1 | <-23.8 | <-37.9 | <-30.5 |

3.6. Common Port to Band 1 Port _1222.7625MHz Insertion Loss



| Insertion Loss(dB) |
|--------------------|
| 1196.9~1248.625MHz |
| > -4.1 |

3.7. Band1 Port – Band2 Port Isolation

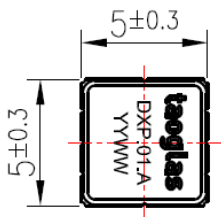


| Isolation (dB) | |
|-------------------------------------|-------------------------------------|
| Band 1 1196.5~1248.625MHz | Band 2 1574.22~1576.62MHz |
| <-36.1 | <-33.8 |

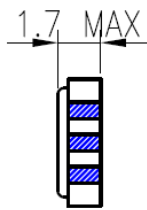
4. Drawing (Unit: mm)

4.1. Diplexer Drawing

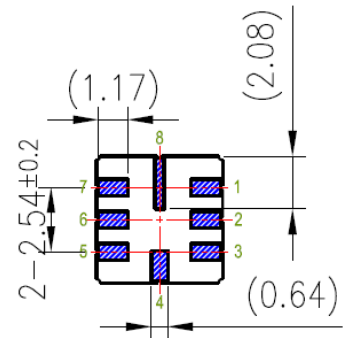
Front View



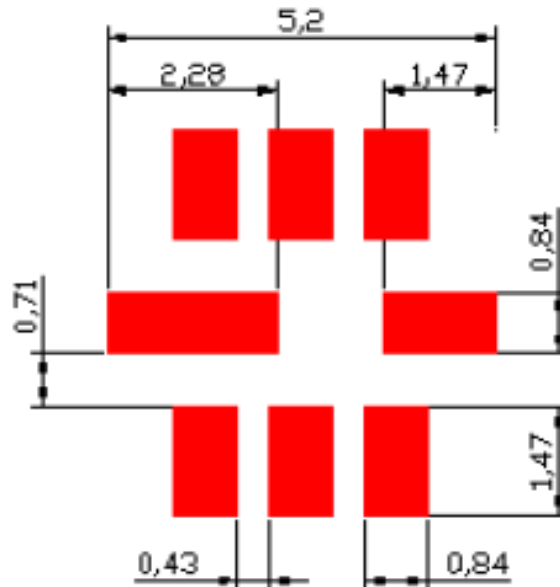
Side View



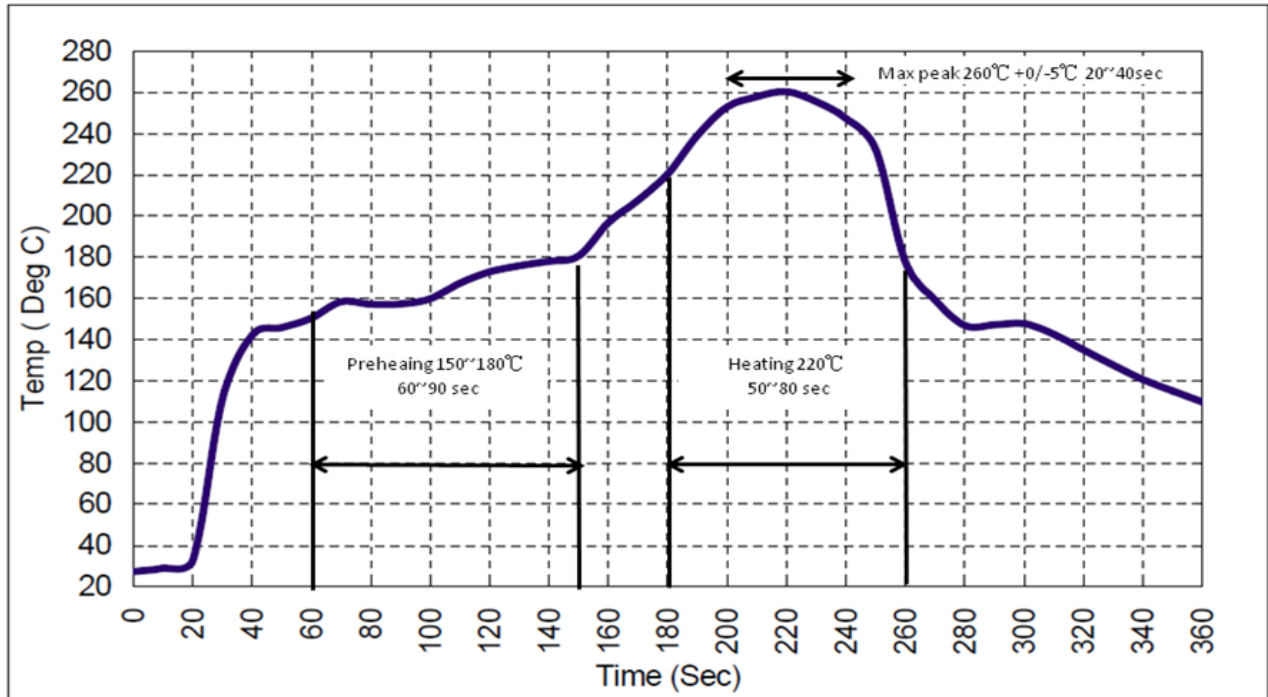
Back View



4.2. Foot Print



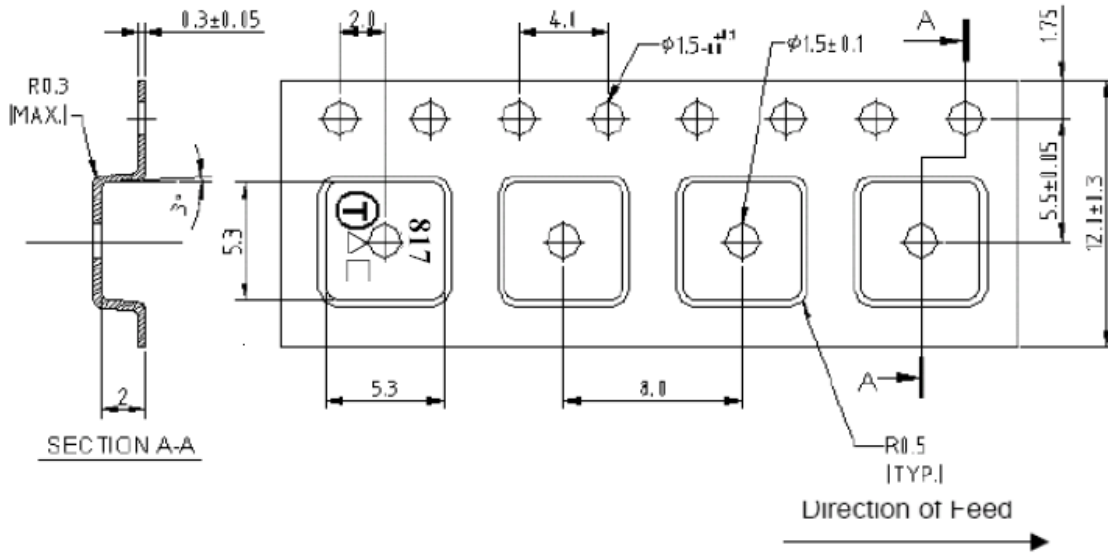
5. Recommended Reflow Profile



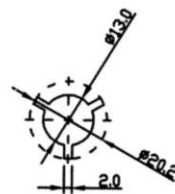
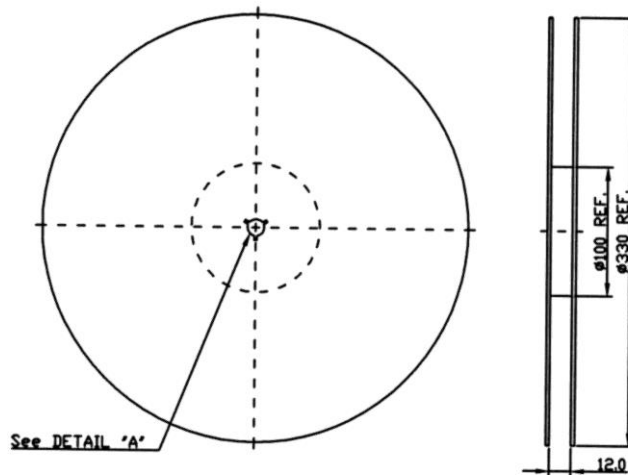
1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds minimum.
3. Heating shall be fixed at 220°C for 50~80 seconds and 260°C as the peak for 20-40 seconds.
4. Time: 2 times.

6. Packaging

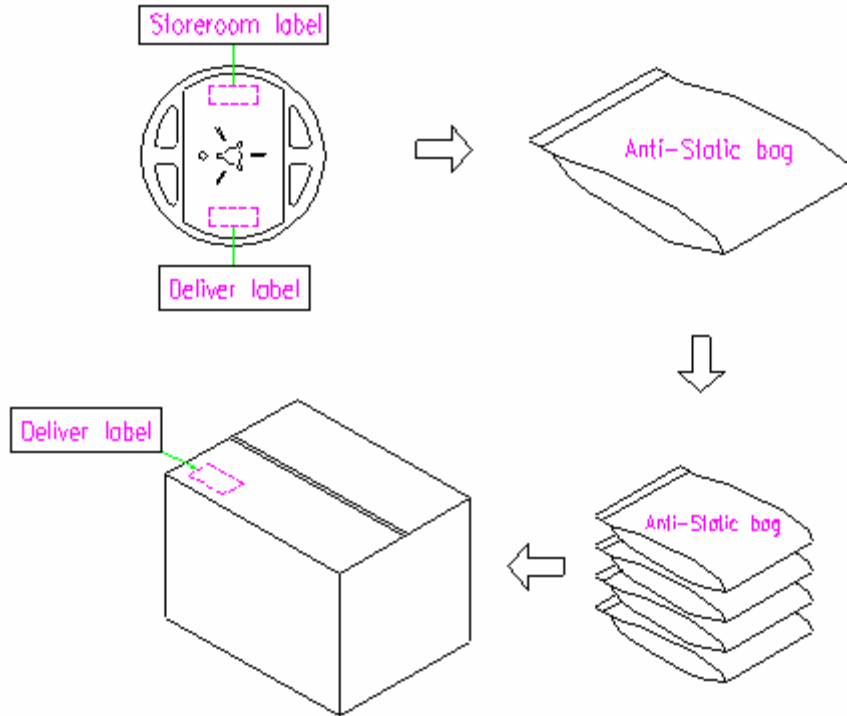
Tape Dimension



Reel Dimension



Packaging Detail



1k pieces per reel, 4 reels per carton.

Taoglas makes no warranties based on the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Taoglas reserves all rights to this document and the information contained herein.

Reproduction, use or disclosure to third parties without express permission is strictly prohibited.

Copyright © Taoglas Ltd.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9