

|               |                           |              |          |
|---------------|---------------------------|--------------|----------|
| 文件编号<br>No    | C 1 7 1 0 3 N C 0 0 - S F |              |          |
| 版本<br>Edition | 1.0                       | 发布日期<br>Date | 2021-3-5 |

# 仕 样 书 SPECIFICATION

名称：半导体致冷器  
Product : Thermo-module

型号：TEC1-B7103NC  
Type : TEC1-B7103NC

顾客印栏 Approved by

| 批准<br>Approver | 审核<br>Checker | 编制<br>Maker |
|----------------|---------------|-------------|
|                |               |             |

|              |              |            |                           |               |     |
|--------------|--------------|------------|---------------------------|---------------|-----|
| 器件型号<br>Type | TEC1-B7103NC | 文件编号<br>No | C 1 7 1 0 3 N C 0 0 - S F | 版本<br>Edition | 1.0 |
|--------------|--------------|------------|---------------------------|---------------|-----|

1. 适用范围 Scope

- 1—1 本仕様书适用于博通（香港）商贸有限公司提供的半导体致冷器。  
This specification is applied to thermo-modules supplied by BOKTONG(H. K.) CO., LIMITED .
- 1—2 公司将根据实际情况的变化修订仕様书。  
This specification is modifiable according as what is actually happening.

2. 性能 Specification

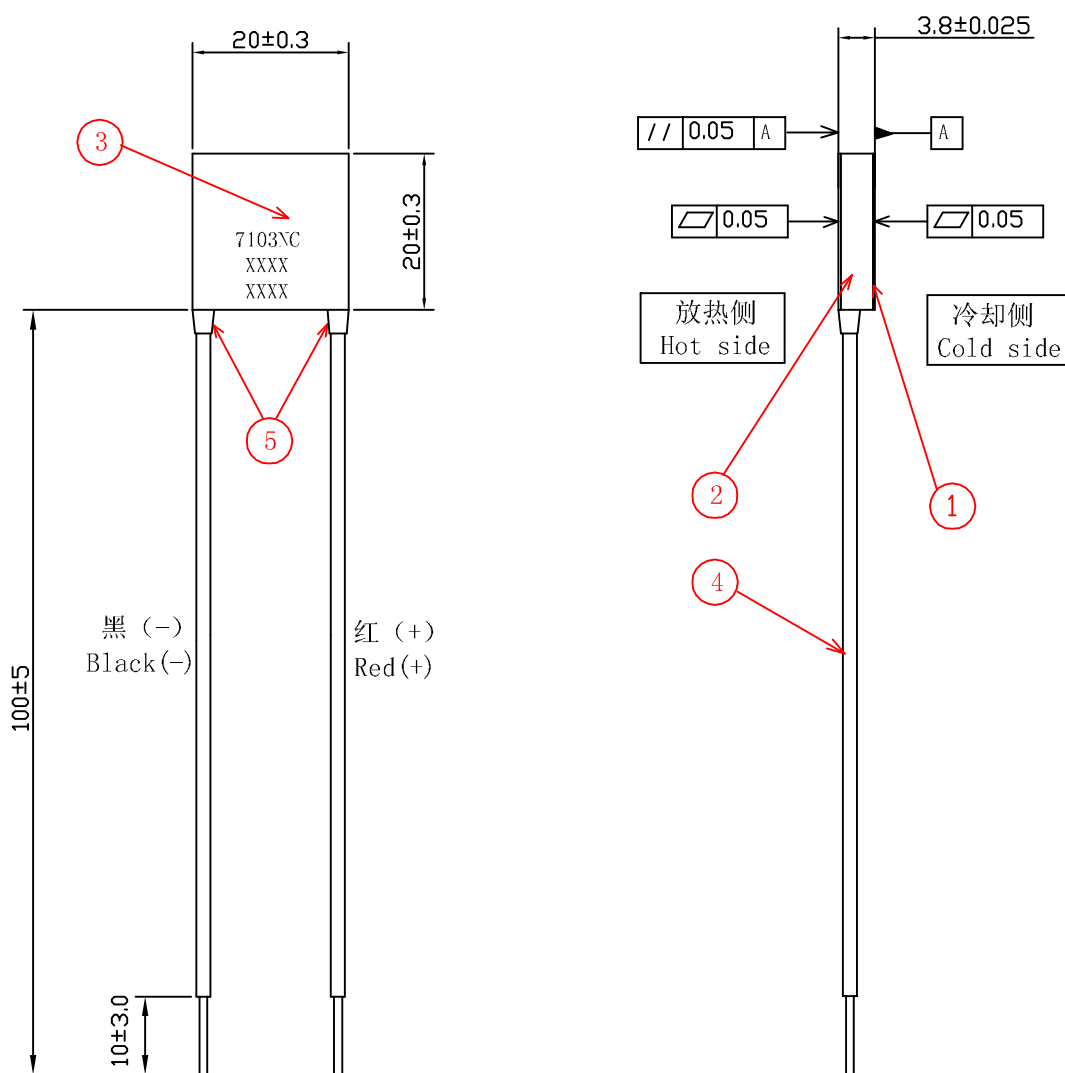
2—1 性能参数 Performance Parameters

| 规格参数 Performance Parameters  |                    | 备注<br>Remarks |
|------------------------------|--------------------|---------------|
| 电阻 Resistance                | 2.2 Ω ± 10%        | 注 Note-1      |
| 最大电流 I <sub>max</sub> .      | 3.0 A              | 注 Note-2      |
| 最大电压 V <sub>max</sub>        | 8.6 V              | 注 Note-3      |
|                              | Th=27℃      Th=50℃ | 注 Note-4      |
| 最大吸热量 Q <sub>cmax</sub>      | 16.3 W      17.6 W | 注 Note-5      |
| 最大温度差 ΔT <sub>max</sub>      | 69 ℃      76 ℃     | 注 Note-6      |
| 焊料熔点<br>Solder melting point | 235 ℃              | 注 Note-7      |
| 抗压强度<br>Compression strength | 1MPa               | 注 Note-8      |

- 注-1 环境温度 25℃、用 4 端子交流内阻仪测试  
Note-1 Measured by AC 4-terminal method at 25℃
- 注-2 致冷器工作在此电流时得到最大温度差  
Note-2 Input current resulting in greatest ΔT (ΔT<sub>max</sub>)
- 注-3 致冷器得到最大温度差时输入的电压  
Note-3 Maximum DC input voltage at ΔT<sub>max</sub> and Th=27℃
- 注-4 Th 表示致冷器热面温度  
Note-4 Temperature of the TEC hot side during operation
- 注-5 致冷器工作在最大温差电流下，且 ΔT=0℃ 时的吸热量  
Note-5 Maximum amount of heat that can be absorbed at cold side (occurs at I = I<sub>max</sub>, ΔT = 0℃).
- 注-6 致冷器工作在最大温差电流下，且 Q<sub>c</sub>=0W 时的最大温度差（最大温度差是在真空度为 1.3Pa 的真空槽内测定的）  
Note-6 Maximum temperature difference a TEC can achieve (occurs at I = I<sub>max</sub>, Q<sub>c</sub> = 0W). (ΔT<sub>max</sub> are measured in a vacuum 1.3Pa)
- 注-7 致冷器使用焊料的最低熔点  
Note-7 Lowest melting point of solder used in the thermoelectric module
- 注-8 推荐单位面积承受最大压力（超过此界限致冷器有可能损坏）  
Note-8 Recommended maximum compressive stress at unit area.

2—2 外形图 Outline Drawing  
另页纸 Attache

|               |                         |  |                        |
|---------------|-------------------------|--|------------------------|
| 名称<br>Product | 半导体致冷器<br>Thermo-module | 分类<br>Class  | 外形图<br>Outline drawing |
| 编号<br>No      | 名称<br>Item              | 规格<br>Specification  |                        |
| 1             | 陶瓷片<br>Ceramic plate    | 96%Al <sub>2</sub> O <sub>3</sub> , 白色<br>96%Al <sub>2</sub> O <sub>3</sub> , white color  |                        |
| 2             | 封装胶<br>Seal             | 用703硅胶或相当品密封致冷器的四周<br>Sealed with 703 RTV or equal between cold and hot ceramic plates     |                        |
| 3             | 打号<br>Mark              | 在致冷器冷面打上型号[7103NC]和产品序号<br>Print type 7103NC and S/N on the cold side surface              |                        |
| 4             | 导线<br>Lead wire         | AWG# 22 或相当品、镀锡、耐热105℃<br>AWG# 22 or equal, Sn-plated on the surface, MAX temperature:105℃ |                        |
| 5             | 导线接合部<br>Joint of wire  | 用703硅胶或相当品密封导线接合部<br>Sealed with 703 RTV or equal between the joint of wire                |                        |



顾客印栏  
Approved by

批准  
Approver

型号  
Type

TEC1-B7103NC

审核  
Checker

图号  
No.

C17103NC00-PD-FLJ

版本  
Edition

1.0

制图  
Maker

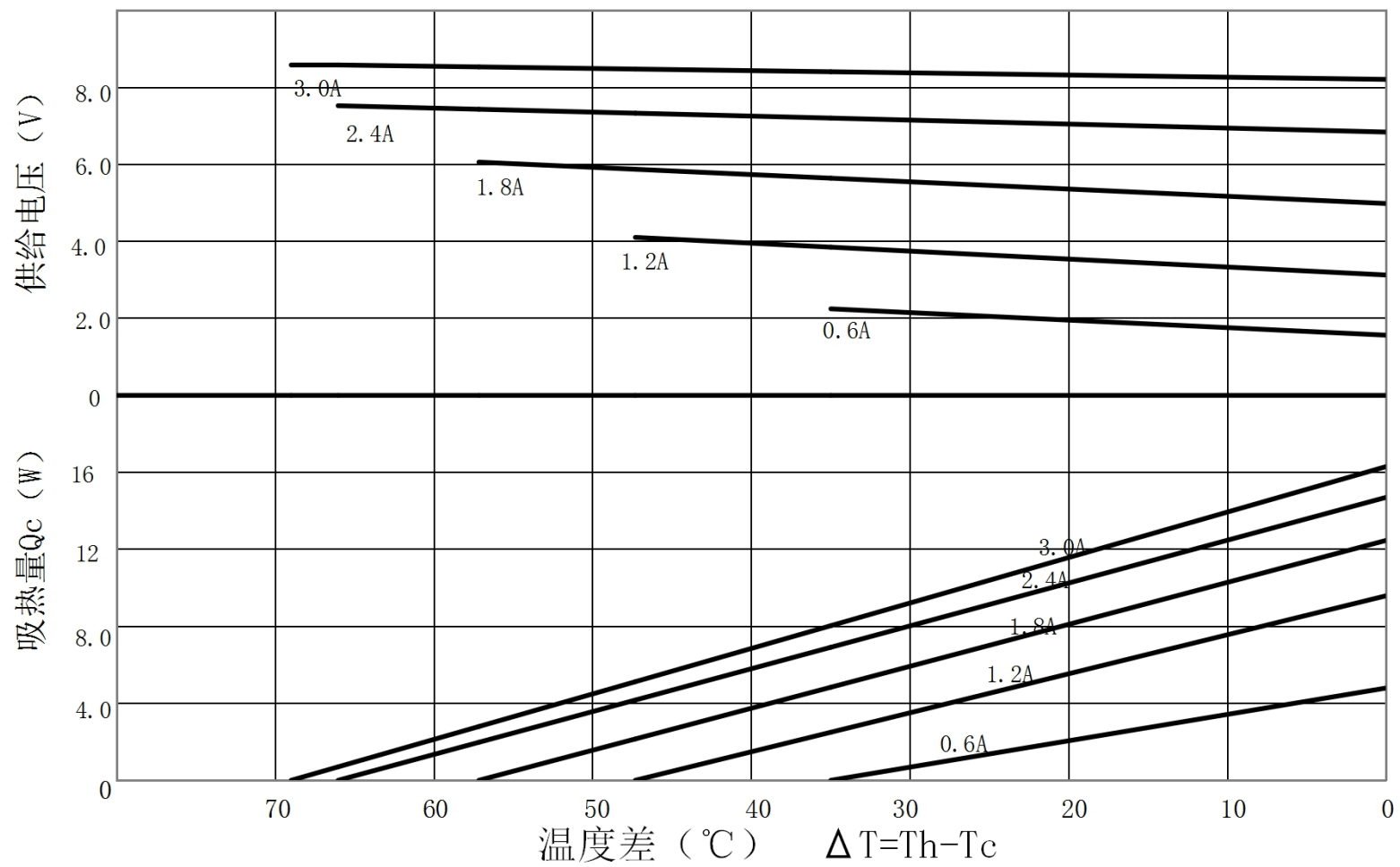
博通（香港）商贸有限公司

发布日期  
Date

2021-3-5

BOKTONG (H. K.) CO., LIMITED

TEC1-B7103NC特性图 (Th=27°C)



TEC1-B7103NC特性图 (Th=50°C)

