

# Technical Data Sheet

**RoHS Compliant Parts Available** 

## **Description**

This CompactPCI termination network provides high performance resistor termination for high-speed data busses.

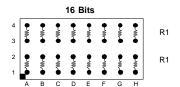
Designed with a ceramic substrate, this device minimizes channel capacitance, a primary cause of reduced system performance. In addition, the BGA package eases routing design, saving the designer many hours of printed circuit layout.

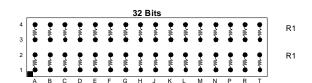
The BGA packaging has been proven to reduce rework and improve reliability.

#### **Features**

- 16 or 32 Bit Terminators
- Ultra Low I/O Coupling
- Slim BGA Package
- 10 Ohm Trimmed Resistance to 5%
- RoHS Compliant Designs Available
  - Compatible with both lead and leadfree manufacturing processes

## Style C



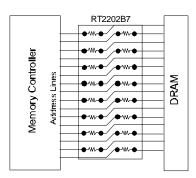


## **Electrical Specifications**

| Resistor Tolerance:         | ± 5.0%                   |  |  |  |
|-----------------------------|--------------------------|--|--|--|
| TCR                         | ± 200ppm/°C              |  |  |  |
| Operating Temperature Range | -55°C to +125°C          |  |  |  |
| Maximum Resistor Power:     | 0.05 Watts at 70°C       |  |  |  |
| Maximum Package Power:      | 1.0 Watts at 70°C        |  |  |  |
| Process Requirements:       |                          |  |  |  |
| Maximum Re-flow Temperature | Per IPC/JEDEC J-STD-020C |  |  |  |

# **Typical Application**

DRAM Series Termination for Address Lines



**Ordering Information** 

| Standard Part | Style | R1 Ω | Bits | Array  | RoHS Part |
|---------------|-------|------|------|--------|-----------|
| Numbers       |       |      |      | Size   | Numbers   |
| RT1200B7      | С     | 10   | 16   | 4 x 8  | RT2200B7  |
| RT1201B7      | С     | 10   | 32   | 4 x 16 | RT2201B7  |

Refer to the following link for detailed Top Side Probe-able information: www.ctscorp.com/components/clearone/TopProveClearOne.pdf

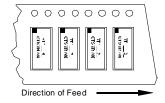
#### Packaging Information

| <u> </u>      |        |         |  |  |
|---------------|--------|---------|--|--|
| Suffix        | TR7    | TR13    |  |  |
| Tape Width    | 24 mm  | 24mm    |  |  |
| Carrier Pitch | 8 mm   | 8 mm    |  |  |
| Reel Diameter | 7 inch | 13 inch |  |  |
| Parts/Reel    | 1,000  | 4,000   |  |  |

Part Number Coding 7 inch reel, Add TR7 to part number, example RT2200B7TR7

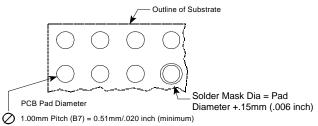
13 inch reel, Add TR13 to part number, example RT2200B7TR13

(Bulk packaging is not available)





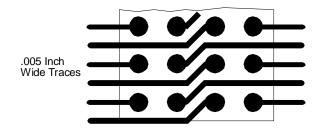
#### **Recommended Land Pattern**



For .006" Thick Solder Paste Stencil, Aperture Opening Should be Equal to the PCB Pad Diameter.

Refer to <a href="https://www.ctscorp.com/components/clearone.asp">www.ctscorp.com/components/clearone.asp</a> for additional PCB design information

# **BGA Routing Scheme**



### **Top Side Probe-able Information**



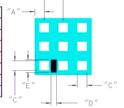
Top Side Probe-able Probe Pad 4x8 Array Shown

Refer to Top Probe-able Application Notes for additional information.

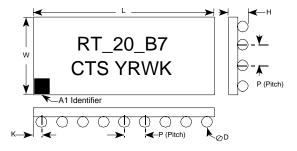
Note: Add a 'P' suffix to order Top Side Probe-able version. Example: RT1201B7PTR7.

Refer to the following link for detailed Top Side Probe-able Information: www.ctscorp.com/components/clearone/TopProveClearOne.pdf

| DIM            | "PITCH SUFFIX" |           |  |
|----------------|----------------|-----------|--|
| METRIC/ENGLISH | B6             | B7        |  |
| "A"            | 0.64/.025      | 0.50/.020 |  |
| "B"            | 1.27/.050      | 1.00/.039 |  |
| "C"            | 0.64/.025      | 0.50/.020 |  |
| "D"            | 0.66/.026      | 0.50/.020 |  |
| "E"            | 0.71/.028      | 0.28/.011 |  |
| "F"            | 0.66/.026      | 0.66/.026 |  |



## **Mechanical Diagram**



| 1.00 mm F | Pitch | L          | W         | Н         | Р         | D         | K         |
|-----------|-------|------------|-----------|-----------|-----------|-----------|-----------|
| RT1200B7  | mm    | 8.00±0.15  | 4.00±0.15 | 1.19±0.15 | 1.00±0.25 | 0.64±0.05 | 0.50±0.25 |
| RT2200B7  | inch  | .315±.006  | .157±.006 | .047±.006 | .039±.010 | .025±.002 | .020±.010 |
| RT1201B7  | mm    | 16.00±0.15 | 4.00±0.15 | 1.19±0.15 | 1.00±0.25 | 0.64±0.05 | 0.50±0.25 |
| RT2201B7  | inch  | .630±.006  | .157±.006 | .047±.006 | .039±.010 | .025±.002 | .020±.010 |

Complete ClearONE Product, Processing, and Application Information can be found at the following link:

http://www.ctscorp.com/components/clearone.asp