

Description

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

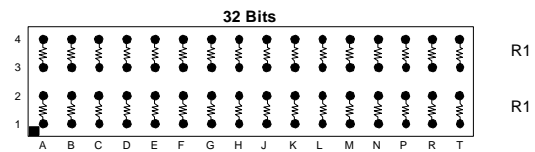
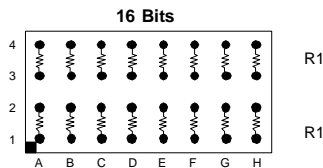
Designed with a ceramic substrate, this device minimizes channel capacitance, a primary cause of reduced system performance. In addition, the BGA package eases routing design, saving the designer many hours of printed circuit layout.

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
- $\pm 1\%$ Resistor Tolerance
- Top Side Probe-able Version Available for Development
- RoHS Compliant Designs Available
 - Compatible with both lead and lead free processes

Style C

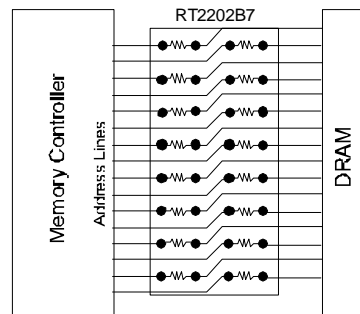


Electrical Specifications

| | |
|------------------------------|---------------------------------------------|
| Resistor Tolerance: | $\pm 1.0\%$ |
| TCR | $\pm 200\text{ppm}/^\circ\text{C}$ |
| Operating Temperature Range | -55°C to $+125^\circ\text{C}$ |
| Maximum Resistor Power: | 0.05 Watts at 70°C |
| Maximum Package Power: | 1.0 Watts at 70°C |
| Process Requirements: | |
| Maximum Temperature | Per IPC/JEDEC J-STD-020C |

Typical Application

DRAM Series Termination for Address Lines



Ordering Information

| 1.00mm Pitch Standard Part No. | Style | R1 Ω | Bits | Array Size | 1.00mm Pitch RoHS Part No. |
|--------------------------------|-------|-------------|------|------------|----------------------------|
| RT1200B7* | C | 10 | 16 | 4 x 8 | RT2200B7* |
| RT1202B7 | C | 33 | 16 | 4 x 8 | RT2202B7 |
| RT1232B7 | C | 22 | 16 | 4 x 8 | RT2232B7 |
| RT1233B7 | C | 25 | 16 | 4 x 8 | RT2233B7 |
| RT1235B7 | C | 50 | 16 | 4 x 8 | RT2235B7 |
| RT1201B7* | C | 10 | 32 | 4 x 16 | RT2201B7* |
| RT1203B7 | C | 33 | 32 | 4 x 16 | RT2203B7 |
| RT1205B7* | C | 50 | 32 | 4 x 16 | RT2205B7* |
| RT1236B7 | C | 100 | 32 | 4 x 16 | RT2236B7 |

* - Indicates Top Side Probable versions available.

Packaging Information

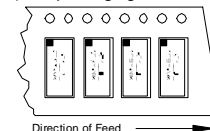
| Suffix | TR7 | TR13 |
|---------------|--------|---------|
| Tape Width | 24 mm | 24mm |
| Carrier Pitch | 8 mm | 8 mm |
| Reel Diameter | 7 inch | 13 inch |
| Parts/Reel | 1,000 | 4,000 |

Part Number Coding

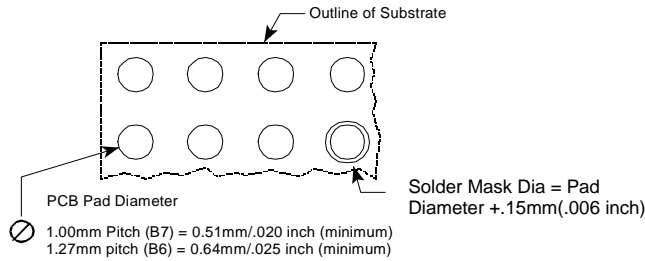
7 inch reel, Add TR7 to part number, example RT2400B6TR7

13 inch reel, Add TR13 to part number, example RT2400B6TR13

(Bulk packaging is not available)



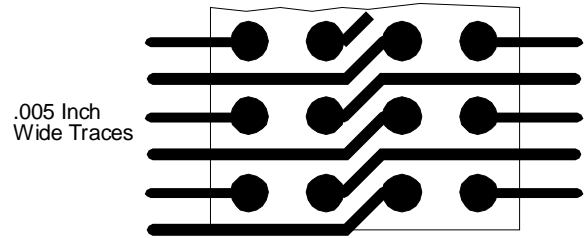
Recommended Land Pattern



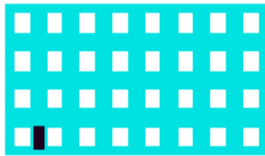
For .006" Thick Solder Paste Stencil, Aperture Opening Should be Equal to the PCB Pad Diameter.

Refer to www.ctscorp.com/components/clearone.asp for additional PCB design information

BGA Routing Scheme



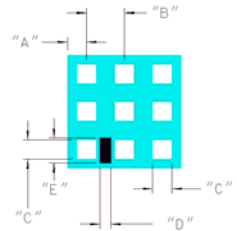
Top Side Probe-able Information



Top Side Probe-able Probe Pad 4x8 Array Shown

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

| DIM METRIC/ENGLISH | "PITCH SUFFIX" | |
|-----------------------|----------------|-----------|
| | 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 |



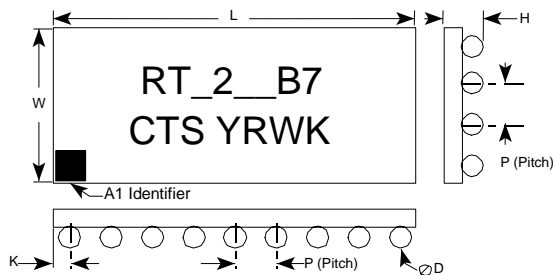
Note: Add a 'P' suffix to order Top Side Probe-able version.

Example: RT2203B7PTR7.

Refer to the following link for detailed Top Side Probe-able Information:

www.ctscorp.com/components/clearone/TopProveClearOne.pdf

Mechanical Diagram



| 16 Bit | | L | W | H | P | D | K |
|---------|------|------------|-----------|-----------|-----------|-----------|-----------|
| Style C | 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 |
| | inch | .315±.006 | .157±.006 | .047±.006 | .039±.010 | .025±.002 | .020±.010 |
| 32 Bit | | L | W | H | P | D | K |
| Style C | 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 |
| | 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>