



### Description

This system bus bias network is designed to provide high performance resistor bias termination for single ended parallel 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

- 8 or 16 Bit Network
- Compliant to PCI and PCIX
- Ultra Low Channel Capacitance
- Laser Trimmed Resistance to 1% Tolerance
- Slim BGA Package
- RoHS Compliant Designs Available
  - Compatible with both lead and lead free processes

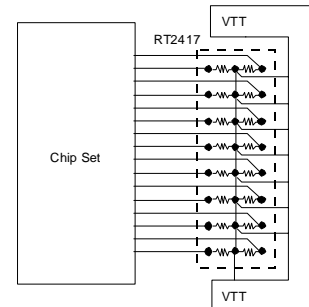
### Style F



### Electrical Specifications

Resistor Tolerance:	± 1.0%
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
<b>Process Requirements:</b>	
Maximum Temperature	Per IPC/JEDEC J-STD-020C

### Typical Application



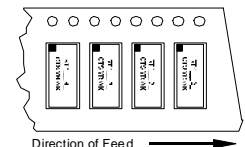
### Ordering Information

1.00mm Pitch Standard Part No.	1.27mm Pitch Standard Part No.	Style	R Ω	Array Size	1.00mm Pitch RoHS Part No.	1.27mm Pitch RoHS Part No.
RT1415B7	RT1415B6	8 Bits	4.7K	3 x 4	RT2415B7	RT2415B6
RT1416B7	RT1416B6	8 Bits	8.2K	3 x 4	RT2416B7	RT2416B6
RT1417B7	RT1417B6	16 Bits	4.7K	3 x 8	RT2417B7	RT2417B6
RT1418B7	RT1418B6	16 Bits	8.2K	3 x 8	RT2418B7	RT2418B6

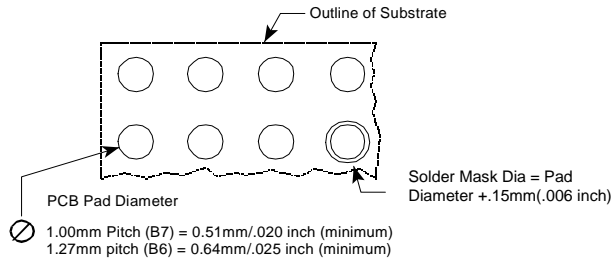
### Packaging Information

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 RT2415B7TR7  
 13 inch reel, Add TR13 to part number, example RT2415B7TR13  
 (Bulk packaging is not available)



## Recommended Land Pattern

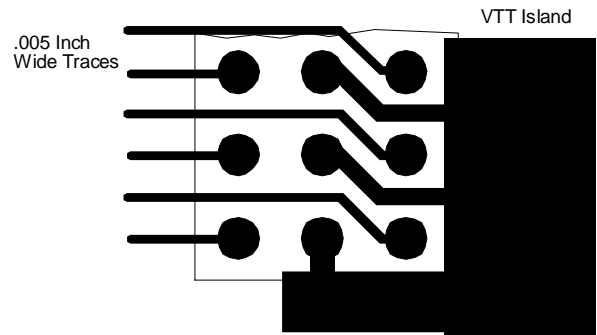


1.00mm Pitch (B7) = 0.51mm/.020 inch (minimum)  
1.27mm pitch (B6) = 0.64mm/.025 inch (minimum)

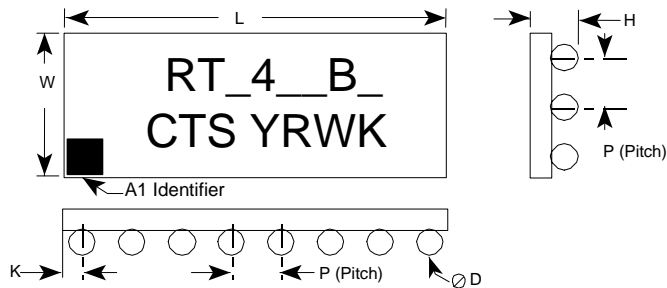
For .006" Thick Solder Paste Stencil, Aperture Opening Should be Equal to the PCB Pad Diameter.

Refer to [www.ctscorp.com/components/clearone.asp](http://www.ctscorp.com/components/clearone.asp) for additional PCB design information

## BGA Routing Scheme



## Mechanical Diagram



1.27 mm Pitch		L	W	H	P	D	K
RT1415B6 RT1416B6 RT1417B6	8 Bit mm inch	5.08±0.15	3.81±0.15	1.32±0.15	1.27±0.25	0.76±0.05	0.64±0.25
		.200±.006	.150±.006	.052±.006	.050±.010	.030±.002	.025±.010
		RT2415B6 RT2416B6 RT2417B6 RT2418B6	16 Bit mm inch	10.16±0.15	3.81±0.15	1.32±0.15	1.27±0.25
.400±.006	.150±.006			.052±.006	.050±.010	.030±.002	.025±.010
1.00 mm Pitch				L	W	H	P
RT1415B7 RT1416B7 RT1417B7	8 Bit mm inch	4.00±0.15	3.00±0.15	1.19±0.15	1.00±0.25	0.64±0.05	0.50±0.25
		.157±.006	.118±.006	.047±.006	.039±.010	.025±.002	.020±.010
		RT2415B7 RT2416B7 RT2417B7 RT2418B7	16 Bit mm inch	8.00±0.15	3.00±0.15	1.19±0.15	1.00±0.25
.315±.006	.118±.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>