# DUAL THÉVENIN TERMINATION NETWORK

## Features

- Stable resistor network
- 18 terminating lines/package
- Saves board space and reduces assembly cost

## Applications

- SCSI termination
- Thévenin termination

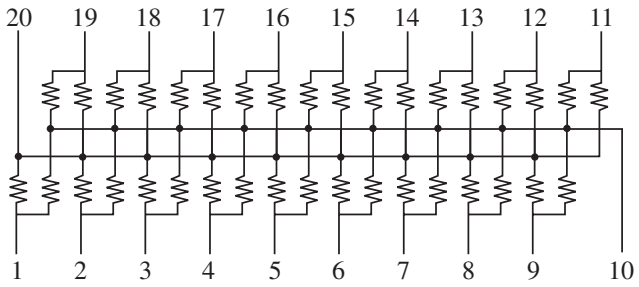
## Product Description

Peripheral devices like disk drives, printers, and CD ROMs are connected to host through a special bus called SCSI (Small Computer System Interface). The fast edge rated signals that are transmitted through the SCSI cable generate ringing on the bus. This will slow down communication between host and peripherals. The SCSI standard recommends proper resistor (Thévenin) termination at host and peripheral locations to eliminate transmission line effects.

CAMDs PRN102/112 Dual Thévenin Termination Networks offer high integration and performance in a miniature QSOP or SOIC package, which saves critical board area and provides manufacturing cost and reliability efficiencies.

Why thin film resistor networks? A terminating resistor is used to reduce or eliminate unwanted reflections on a transmission line. It can perform this function only when its resistance value matches the characteristic impedance of the transmission line. The resistors used for terminating the transmission lines should be noiseless, stable and functional at high frequencies. Unlike thin film-based resistor networks, conventional thick film resistors used for terminating transmission lines are not stable over temperature and time and impose system performance limitations at very high frequencies.

## SCHEMATIC CONFIGURATION




| STANDARD SPECIFICATIONS | |
|---|---|
| TCR | ±250ppm |
| Operating Temperature Range | 0°C to 70°C |
| Power Rating/Resistor | 100mW |
| Storage Temperature | –65°C to +150°C |
| Package Power Rating | 1W, max. |

| NON-STANDARD SPECIFICATIONS | | |
|---|---|---|
| Absolute Tolerance (R) | ±2% | ±1% |

| STANDARD VALUES | | |
|---|---|---|
| **R1 (Ω)** | **R2 (Ω)** | **Code** |
| 220 | 330 | 221/331 |

| NON-STANDARD VALUES | | |
|---|---|---|
| Resistance Range | R1 | 170Ω to 660Ω |
| Resistance Range | R2 | 110Ω to 440Ω |

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| STANDARD PART ORDERING INFORMATION | | | | | |
|---|---|---|---|---|---|
| **Package** | **Package** | | **Ordering Part Number** | | |
| **R Code** | **Pins** | **Style** | **Tubes** | **Tape & Reel** | **Part Marking** |
| 221/331 | 20 | SOIC | PRN10220W221/331G/T | PRN10220W221/331G/R | PRN10220W221/331G |
| 221/331 | 20 | QSOP | PRN112 221/331G/T | PRN112 221/331G/R | PRN112 221/331G |

| NON-STANDARD PART ORDERING INFORMATION | | |
|---|---|---|
| PRN102 (Example) | XXX/XXX | T |
| **Part Series** | **Value Code** | **Tolerance** |
| PRN102W-SOIC Wide | R1 Code/R2 Code | J = ±5% |
| PRN112-QSOP | | G = ±2% |
| | | F = ±1% |

California Micro Devices can develop a fully customized solution which embodies the configuration shown in this data sheet or modified to suit specific application requirements. Very precise TCR, TCR tracking and resistor tolerances, and resistor-to-resistor ratio matching can also be provided. A Non-Recurring Engineering (NRE) charge will apply for all fully customized requirements and a minimum order/lot will be required.

Please direct your detailed circuit configuration and specification requirements to your local CAMD representative or to the factory for a quotation.

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