



Clock Terminator and Local EMI/RFI Filter

Features

- Filters at source of emissions
- Stable resistor-capacitor network
- Ideal for high-speed logic
- Low lead inductance
- Reduces board space compared to discretes
- 3-Pin SOT-23 package

Applications

- Clock termination
- Point of contact filtering
- Low pass filtering
- EMI/RFI filtering

Product Description

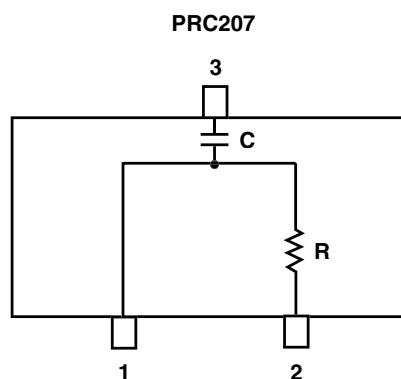
High speed microprocessors like Intel's Pentium®, DEC's Alpha, Motorola's 68K and PowerPC, Sun's SPARC, MIPS, and other RISC-based systems require well-controlled and precise clock signals to maintain a high performance synchronous system. However, very fast edge rated clock signals exhibit transmission line effects on the clock lines resulting in undershoot and overshoot disturbances.

CAMD's PRC207 SOT resistor-capacitor integrated thin film networks are specifically designed to eliminate transmission line effects on high speed clock and data lines. They are effective in suppressing EMI/RFI noise at I/O ports and can also be used as "distributed" AC terminators when filtered lines are dispersed across the board.

These networks are fabricated on a silicon substrate using advanced thin film technology. They have low parasitic inductance compared to discrete and conventional thick film filters and provide effective AC termination and EMI/RFI noise suppression over a wide range of frequencies.

Why thin film RC networks? The PRC207 is an integrated RC network fabricated on a silicon substrate using advanced thin film technology. This technology insures a fixed time constant and does not create additional skew on the clock lines. It offers very low parasitic inductance compared to conventional discrete thick film-based approaches and provides effective termination at high frequencies.

SCHEMATIC CONFIGURATION



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. 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.

STANDARD SPECIFICATIONS	
Resistance Range	15 to 100Ω
Capacitance Range	10 to 100pF
Absolute Tolerance (R)	±10%
Absolute Tolerance (C)	±20%
Operating Temperature Range	−55°C to 125°C
Power Rating/Resistor	100mW
Storage Temperature	−60°C to 150°C
Package Power Rating	1W, MAX

TYPICAL VALUES			
R(Ω)	C(pF)	Breakdown Voltage MAX	fc @ 3db*
33	47	30V	103MHz
47	47	30V	72MHz
47	33	30V	103MHz
50	68	30V	47MHz
75	50	30V	42MHz
100	100	10V	16MHz
50	180	10V	18MHz
40	50	30V	80MHz

* with 0 source impedance

Part Number Key

