AC Termination Network

Features

- Stable resistor-capacitor network
- No signal delays
- 18 terminating lines/package
- Saves board space and component cost

Applications

- AC Terminator
- Low Pass Filter
- Power Supply Filtering

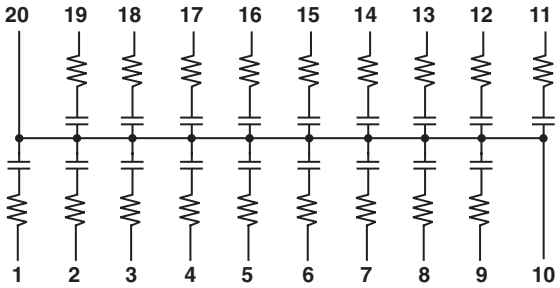
Product Description

CAMD's PRC202/212 Integrated Resistor-Capacitor Termination Network is designed to eliminate transmission line effects on high speed data lines. This thin film network can support (terminate) 18 data lines, and requires no DC power. The small surface mount packages improve board yields and reliability, minimize space and routing problems on the board, and reduce assembly costs. The PRC202/212 is a space efficient and cost effective replacement for conventional MLCC surface mount chip resistors and capacitors.

Why thin film RC networks? A terminating RC is used to reduce or eliminate reflections on a transmission line. It can perform this function only when its impedance value matches the characteristic impedance of the transmission line.

Passive components affect the electrical performance of electronic systems. In reality, every resistor has some parasitic series inductance and a parasitic capacitance; and every capacitor has both series resistance and inductance. At low speeds, these parasitics do not affect the performance of resistors and capacitors. However, at higher speeds, these parasitics cause mismatch in a termination. To prevent these problems in high speed digital designs, a designer must take special care in selecting passive components or networks.

SCHEMATIC CONFIGURATION



STANDARD PART ORDERING INFORMATION

	Package		Ordering Part Number		
RC Code	Pins	Style	Bag	Tape & Reel	Part Marking
11	3	SOT-23	PRC207330K/470M/B	PRC207330K/470M/R	RC11
12	3	SOT-23	PRC207470K/470M/B	PRC207470K/470M/R	RC12
13	3	SOT-23	PRC207470K/330M/B	PRC207470K/330M/R	RC13
14	3	SOT-23	PRC207500K/680M/B	PRC207500K/680M/R	RC14
15	3	SOT-23	PRC207750K/500M/B	PRC207750K/500M/R	RC15
16	3	SOT-23	PRC207101K/101M/B	PRC207101K/101M/R	RC16
17	3	SOT-23	PRC207500K/181M/B	PRC207500K/181M/R	RC17
18	3	SOT-23	PRC207400K/500M/B	PRC207400K/500M/R	RC18

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C1180600

NON-STANDARD PART ORDERING INFORMATION				
PRC202 (Example)	**XXX**	**T1**	**XXX**	T2
Part Series	**R Code**	**R Tolerance**	**C Code**	**C Tolerance**
PRC202 - SOIC		K - ±10%		K - ±10%
PRC212 - QSOP		M - ±20%		M - ±20%

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	
Absolute Tolerance (R)	±10%
Absolute Tolerance (C)	±20%
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)	±10%
Absolute Tolerance (C)	±10%
Operating Temperature Range	0°C to 70°C
Power Rating/Resistor	100mW

STANDARD VALUES			
R(Ω)	**C(pf)**	**Breakdown Voltage (Max)**	**RC Code**
33	47	133V	330/470A
47	47	133V	470/470A
47	33	93V	470/330A
50	180	26V	500/181A
75	50	123V	750/500A
100	100	48V	101/101A

NON-STANDARD VALUES	
Resistance Range	10Ω to 150KΩ
Capacitance Range	33pF to 100pF

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