

## Product Description

The RN-1 is an isolated resistor network designed to offer a highly integrated and stable resistor network for general-purpose applications. Thin film networks offer significant advantages over conventional thick film processes in terms of tighter absolute and ratio tolerances, greater stability, lower noise, and Temperature coefficient of resistance (TCR). Furthermore, they offer superior high frequency performance with minimal parasitic inductance and capacitance. Integrated thin film networks also afford the benefits of board space savings, reduced assembly costs, and increased reliability with fewer components



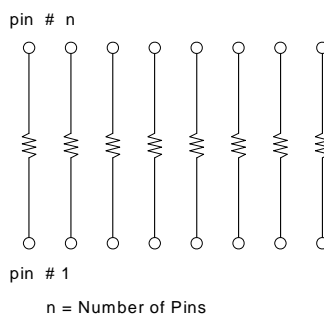
## Features

- Reliable TaN thin-film-on-silicon technology
- 8 , 10 ,12 terminating lines per package
- PCB board space saving, assembly cost reduction

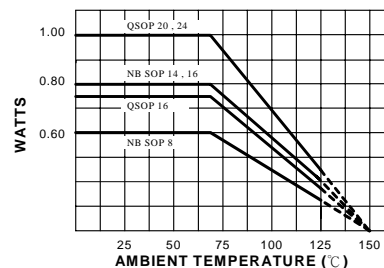
## Applications

- Series termination
- Parallel termination
- Digital pulse squaring
- Coding and decoding
- Telemetry

## Schematic



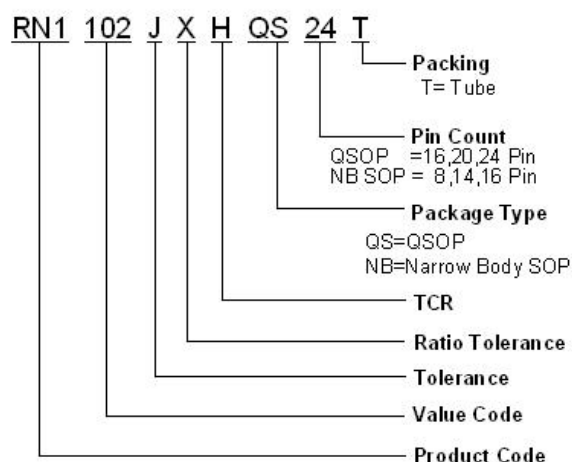
## Power Derating



## Specifications

Description	Standard	Non-Standard <sup>1</sup>		
		D	F	G
Abs. Tolerance code	J	D	F	G
Absolute Tolerance (R)	±5%	±0.5%	±1%	±2%
Ratio Tolerance code	X	R	Q	P
Ratio Tolerance (R)	No Ratio Tol.	±0.1%	±0.2%	±0.5%
TCR code	H	A	B	C
TCR (ppm/°C)	±100	±75	±50	±25
TTCR (ppm/°C)	±25	±5, ±10		
Power Rating / Resistor @Ta=70°C	0.100 watt for ≤ 1K 0.025 watt for > 1K			
Maximum Operating Voltage	50V			
Minimum Insulation Resistance	10,000MΩ			
Operation Temperature	-55°C ~ 125°C			
Storage Temperature	-65°C ~ 150°C			

## How to Order



Note 1: A Non-Recurring Engineering (NRE) charge and a minimum order/lot size may apply for all fully customized requirements.

## Standard Resistance Values

Resistance (Ω)	10	22	33	39	47	51	68	220	330	470	510	680	1K	2.2K	4.7K	10K	20K	50K	100K
Correspondent Value Code	100	220	330	390	470	510	680	221	331	471	511	681	102	222	472	103	203	503	104

## Standard Packages

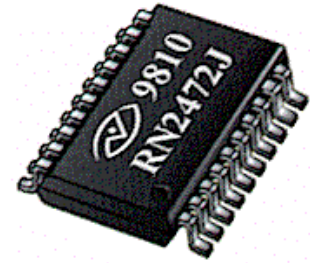
	Pin No.	Ea.tube
QSOP	16	100
	20	50
	24	50
N/B SOP	8	100
	14	50
	16	50

## Options

- Viking is capable of supply following options based on customer's demand
- Packages → TSSOP 20,24 Pin
  - Resistance Variation → 10~100KΩ
  - Packing → Wafer form

## Product Description

The RN-2 is a bussed resistor network designed to offer a highly integrated and stable resistor network for general-purpose applications. Thin film networks offer significant advantages over conventional thick film processes in terms of tighter absolute and ratio tolerances, greater stability, lower noise, and Temperature coefficient of resistance (TCR). Furthermore, they offer superior high frequency performance with minimal parasitic inductance and capacitance. Integrated thin film networks also afford the benefits of board space savings, reduced assembly costs, and increased reliability with fewer components



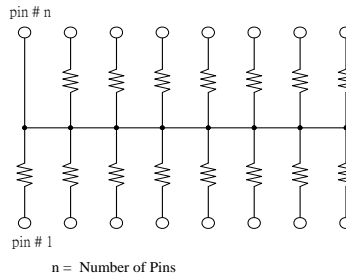
## Features

- Reliable TaN thin-film-on-silicon technology
- Multiple resistors tied to a common mode
- Ultra-miniature package complies to JEDEC standards

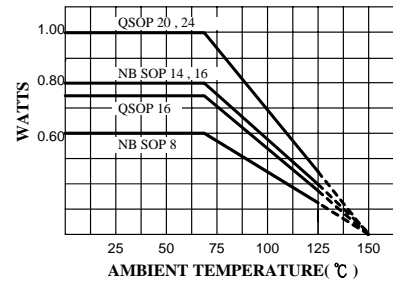
## Applications

- Pull up / pull down
- Parallel termination
- Digital pulse squaring
- Coding and decoding

## Schematic



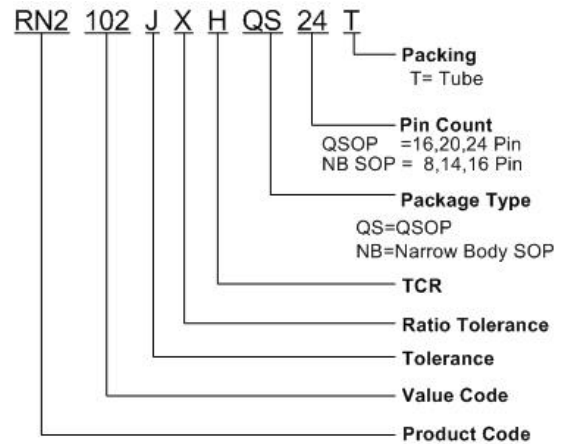
## Power Derating



## Standard Specifications

Description	Standard	No-Standard <sup>1</sup>		
Abs. Tolerance code	J	D	F	G
Absolute Tolerance (R)	±5%	±0.5%	±1%	±2%
Ratio Tolerance code	X	R	Q	P
Ratio Tolerance (R)	No Ratio Tol.	±0.1%	±0.2%	±0.5%
TCR code	H	A	B	C
TCR (ppm/°C)	±100	±75	±50	±25
TTCR (ppm/°C)	±25	±5, ±10		
Power Rating / Resistor @Ta=70°C	0.100 watt for ≤1K 0.025 watt for >1K			
Operation Temperature	-55°C ~ 125°C			
Storage Temperature	-65°C ~ 150°C			

## How to Order



Note 1: A Non-Recurring Engineering (NRE) charge and a minimum order/lot size may apply for all fully customized requirements.

## Standard Resistance Values

Resistance (Ω)	100	220	270	330	390	470	1K	1.5K	2K	2.2K	4.7K	10K	100K
Correspondent value Code	101	221	271	331	391	471	102	152	202	222	472	103	104

## Standard Packages

	Pin No.	Ea.tube
QSOP	16	100
	20	50
	24	50
N/B SOP	8	100
	14	50
	16	50

## Options

- Viking is capable of supply following options based on customer's demand
- Packages → TSSOP 20,24 Pin
  - Resistance Variation → 10~100KΩ
  - Packing → Wafer form

## Product Description

The RN-3 is an integrated dual Thevenin termination network designed to eliminate transmission line effects on high-speed data lines. SCSI (Small Computer Systems Interface) is a bus interface covered by an ANSI Standard that allows for peripheral devices to be connected in a daisy chain and communicate with the host processor. Fast edge signals transmitted through the SCSI cable can generate ringing on the bus that can slow down communication between the host and peripherals. The SCSI standard recommends Thevenin termination at the host and peripheral locations to eliminate these transmission line effects.

Proper resistor termination requires a resistor whose value closely matches the characteristic impedance of the transmission line. Thin film networks offer significant advantages over conventional thick film processes in terms of tighter absolute and ratio tolerances, greater stability, lower noise, and Temperature Coefficient of Resistance (TCR). Furthermore, they offer superior high frequency performance with minimal parasitic inductance and capacitance. Integrated thin film networks also afford the benefits of board space savings, reduced assembly costs, and increased reliability with fewer components.



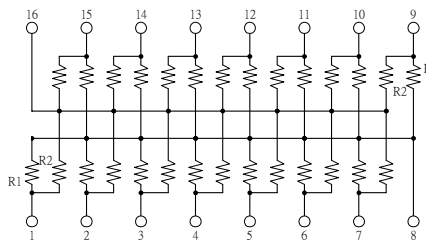
## Features

- Proven TaN thin-film-on technology
- Saves board space and reduces assembly cost
- Ultra-miniature package complies to JEDEC standards

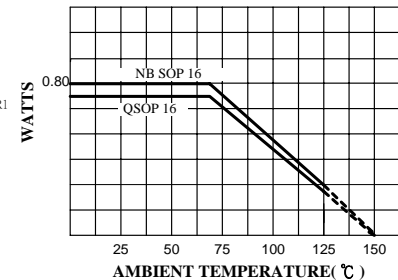
## Applications

- Therein termination
- SCSI termination
- SCSI Buss device
- Pull UP / pull down

## Schematic



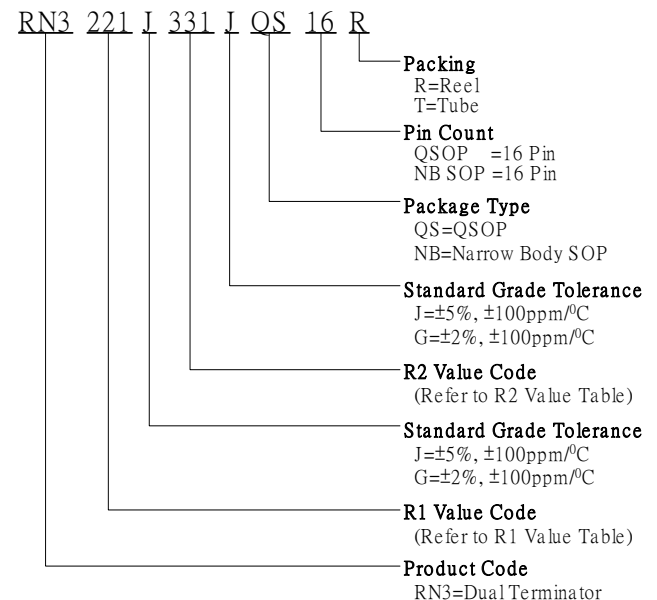
## Power Derating



## Specifications<sup>1</sup>

Description	Values		
<b>Tolerance code</b>	F	G	J
<b>Absolute Tolerance (R)</b>	±1%	±2%	±5%
<b>TCR (ppm/°C)</b>	±50	±100	±100
<b>TTCR (Typical)</b>	±25ppm/°C		
<b>Power Rating / Resistor</b> @Ta=70°C	0.100 watt		
<b>Maximum Operating Voltage</b>	50V		
<b>Operation Temperature</b>	-55°C ~ 125°C		
<b>Storage Temperature</b>	-65°C ~ 150°C		
Note 1: A Non-Recurring Engineering (NRE) charge and a minimum order/lot size may apply for all fully customized requirements.			

## How to Order



## Resistance Values

Resistance (Ω)	Correspondent Value Code
R1=220, R2=330	R1=221, R2=331

## Standard Packages

	Pin No.	Ea.tube
QSOP	16	100
N/B SOP	16	50

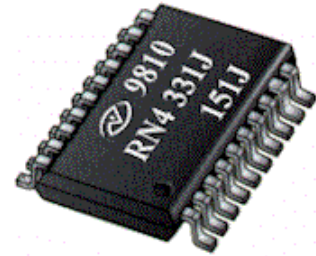
## Options

Viking is capable of supply following options based on customer's demand  
Packing → Wafer form

## Product Description

The RN-4 is a Small Computer System Interface (SCSI) compliant termination network that provides the mechanical, electrical, and functional requirements for an input/output bus to connect small computers with a variety of peripheral devices. The most common application of this bus is to connect small computers with disk drive (mass storage) units. The RN-4 provides 7 or 9 sets of three-resistor terminator configuration for the differential-line version of the SCSI bus in just one package, which saves board space and reduced assembly costs by replacing 21 or 27 discrete components.

Thin film networks offer significant advantages over conventional thick film processes in terms of tighter absolute and ratio tolerances, greater stability, lower noise, and Temperature Coefficient of Resistance (TCR). Furthermore, they offer superior high frequency performance with minimal parasitic inductance and capacitance. Integrated thin film networks also afford the benefits of board space savings, reduced assembly costs, and increased reliability with fewer components



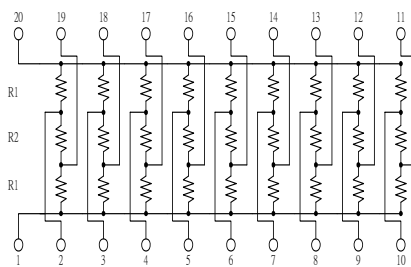
## Features

- Reliable TaN thin-film-on-silicon technology
- SCSI Termination
- 18 terminating lines / package

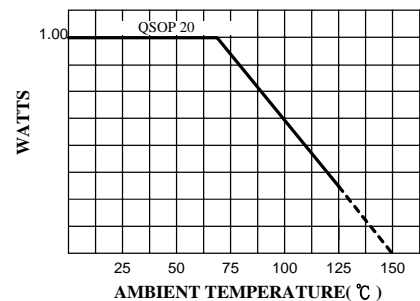
## Applications

- Differential SCSI termination
- SCIS Buss devices

## Schematic



## Power Derating

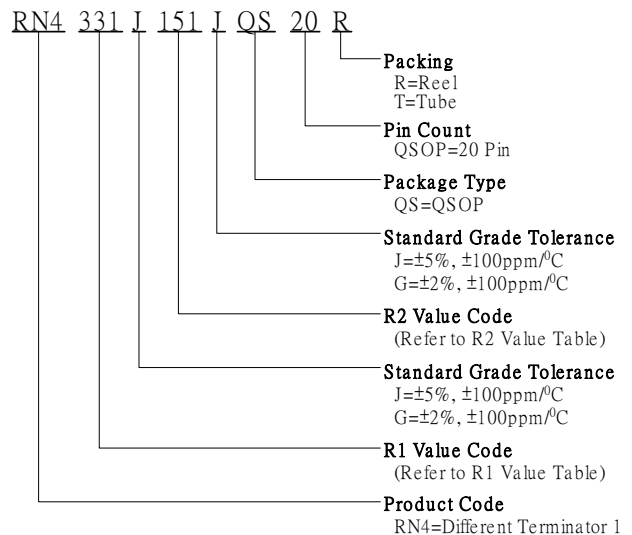


## Specifications<sup>1</sup>

Description	Values		
<b>Tolerance code</b>	F	G	J
<b>Absolute Tolerance (R)</b>	±1%	±2%	±5%
<b>TCR (ppm/°C)</b>	±50	±100	±100
<b>TTCR (Typical)</b>	±25ppm/°C		
<b>Power Rating / Resistor @Ta=70°C</b>	0.100 watt		
<b>Maximum Operating Voltage</b>	50V		
<b>Operation Temperature</b>	-55°C ~ 125°C		
<b>Storage Temperature</b>	-65°C ~ 150°C		

Note 1: A Non-Recurring Engineering (NRE) charge and a minimum order/lot size may apply for all fully customized requirements.

## How to Order



## Resistance Values

Resistance (Ω)	Correspondent Value Code
R1=330, R2=150	R1=331, R2=151

## Standard Packages

	Pin No.	Ea.tube
QSOP	20	50

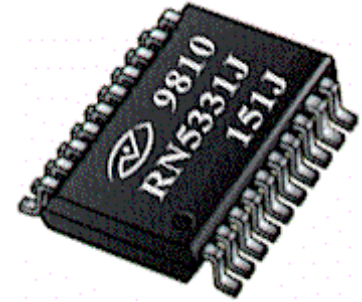
## Options

- Viking is capable of supply following options based on customer's demand
- Packages → TSSOP 20 Pin
  - Packing → Wafer form

## Product Description

The RN-5 is a Small Computer System Interface (SCSI) compliant termination network that provides the mechanical, electrical, and functional requirements for an input/output bus to connect small computers with a variety of peripheral devices. The most common application of this bus is to connect small computers with disk drive (mass storage) units. The RN-5 provides 7 or 9 sets of three-resistor terminator configuration for the differential-line version of the SCSI bus in just one package, which saves board space and reduced assembly costs by replacing 21 or 27 discrete components.

Thin film networks offer significant advantages over conventional thick film processes in terms of tighter absolute and ratio tolerances, greater stability, lower noise, and Temperature Coefficient of Resistance (TCR). Furthermore, they offer superior high frequency performance with minimal parasitic inductance and capacitance. Integrated thin film networks also afford the benefits of board space savings, reduced assembly costs, and increased reliability with fewer components



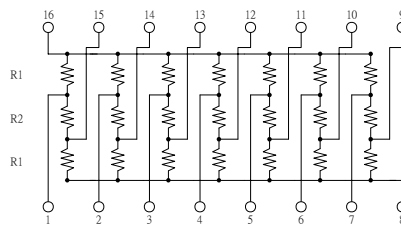
## Features

- Proven TaN thin-film technology
- QSOP available
- SCSI termination

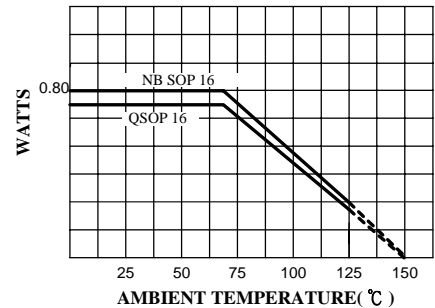
## Applications

- Differential SCSI termination
- SCSI Buss devices

## Schematic



## Power Derating



## Specifications<sup>1</sup>

Description	Values		
<b>Tolerance code</b>	F	G	J
<b>Absolute Tolerance (R)</b>	±1%	±2%	±5%
<b>TCR (ppm/°C)</b>	±50	±100	±100
<b>TTCR (Typical)</b>	±10, ±25ppm/°C		
<b>Power Rating / Resistor @Ta=70°C</b>	0.100 watt		
<b>Maximum Operating Voltage</b>	50V		
<b>Operation Temperature</b>	-55°C ~ 125°C		
<b>Storage Temperature</b>	-65°C ~ 150°C		
Note 1: A Non-Recurring Engineering (NRE) charge and a minimum order/lot size may apply for all fully customized requirements.			

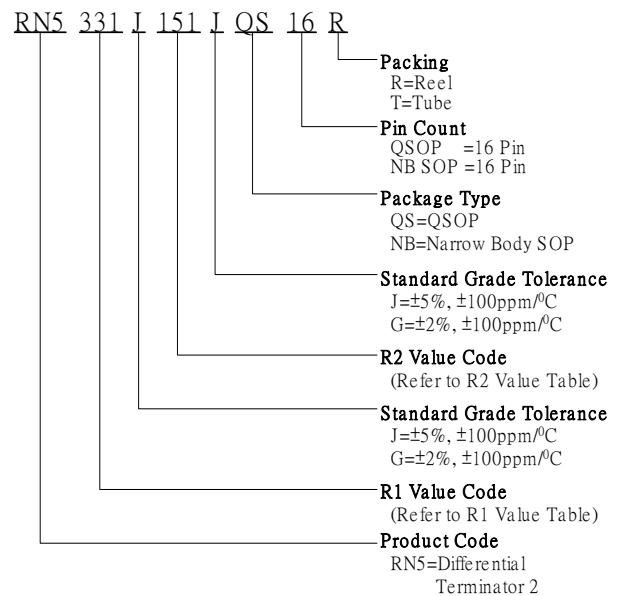
## Resistance Values

Resistance (Ω)	Correspondent Value Code
R1=330, R2=150	R1=331, R2=151

## Standard Packages

	Pin No.	Ea.tube
QSOP	16	100

## How to Order



## Options

Viking is capable of supply following options based on customer's demand

Packing → Wafer form