



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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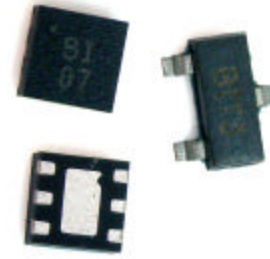
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# MODELS

## SS103VD, SFN06VD



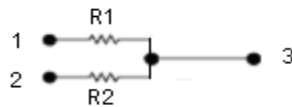
**Voltage divider circuit**  
**Thin film resistor network**  
**RoHS compliant available**

### FEATURES

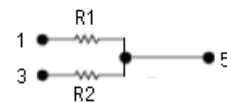
Precision Nichrome Resistors on Silicon	Passivation coating provides protection in humid environments
Industry Standard Packaging	6 pad SON <sup>1</sup> 2mm square with 0.65 mm pitch (JEDEC MO-229D) 3 lead SOT23 (JEDEC TO-239)
Ratio Tolerances	< ± 0.05%
TCR Tracking Tolerances	< ± 5 ppm/°C

### CIRCUIT SCHEMATIC

3 lead SOT23



6 pad SON 2mm square



### ELECTRICAL<sup>2</sup>

Standard Resistance Range	1K ohms to 100K ohms
Resistor Tolerances	± 0.25%
Ratio Tolerances	± 0.05%
TCR	Reference TCR table
Operating Temperature Range	-55°C to +125°C
Interlead Capacitance	< 2 pF
Insulation Resistance	= 10,000 Megohms
Maximum Operating Voltage	100 Vdc or v PR
Noise, Maximum (MIL-STD-2002, Method 308)	-25 dB
Maximum Package Power @ 70°C	0.2 Watts

### RESISTANCE TOLERANCES

Accuracy Code at 25°C	CA	CB	D	FA	F	G	J
Absolute Resistance Tolerances (%)	± 0.25	± 0.25	± 0.5	± 1.0	± 1.0	± 2.0	± 5.0
Ratio Tolerances (R1 Ref) (%)	± 0.05	± 0.1	± 0.1	± 0.05	± 1.0	N/A	N/A

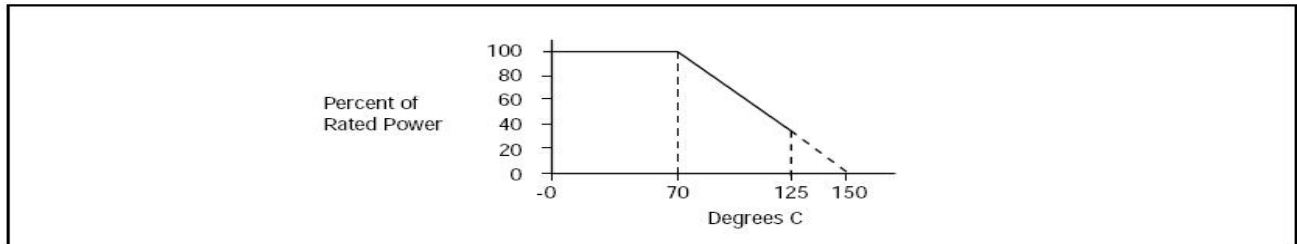
<sup>1</sup> Small outline no lead (SON) package is also referred to as quad flat no lead (QFN) or dual flat no lead (DFN) packages.

<sup>2</sup> Specifications subject to change without notice.

## TEMPERATURE COEFFICIENT OF RESISTANCE (TCR)

TCR Code (-55°C to 125°C)	Q	P	S	L
Absolute (ppm/°C)	± 25	± 50	± 100	± 200
Tracking (R1 Ref) (ppm/°C)	± 5	± 5	N/A	N/A

## POWER DERATING CURVE



## ENVIRONMENTAL (MIL-R-83401)

Thermal Shock plus Power Conditioning	ΔR 0.25%
Short Time Overload	ΔR 0.1%
Moisture Resistance	ΔR 0.2%
Mechanical Shock	ΔR 0.25%
Vibration	ΔR 0.25%
Low Temperature Operation	ΔR 0.1%
High Temperature Exposure	ΔR 0.1%
Resistance to Solder Heat	ΔR 0.05%
Marking Permanency	Per MIL-STD-202, Method 215
Storage Temperature Range	-55°C to +125°C

## MECHANICAL

Lead Plating	80/20 Tin Lead (Standard) 100 matte Tin (RoHS)
Lead Material	Copper Alloy
Lead Configurations (SLP/SS1)	No lead, Gull Wing
Lead Coplanarity (SS1 only)	0.003" (0.102 mm)
Substrate Material	Silicon
Resistor Material	Passivated Nichrome
Body Material	Molded Epoxy
Package Types	6 pad SON 2mm square, 3 lead SOT23

## DIVIDER RATIO

Resistance Code	Ratio (R2/R1)	R1 (ohms)	R2 (ohms)
01	1.613	12.4K	20K
02	10	10K	100K
03	4	5K	20K
05	1	20K	20K
06	9	11.3K	101.7K
07	2	10K	20K
08	3	3.333K	10K
09	2	5K	10K
10	1	10K	10K
11	2	1K	2K
12	2	50K	100K

## ORDERING INFORMATION<sup>3</sup>

**S S1 03 VD 05 F S LF 13**

Model Series: \_\_\_\_\_  
S = Passivated Nichrome on Silicon

Package Type: \_\_\_\_\_  
S1 = SOT-23  
FN = SON 2mm sq

Pin Count: \_\_\_\_\_

Circuit Type: \_\_\_\_\_  
VD=Voltage Divider

Resistance Code: \_\_\_\_\_  
Divider ratio table

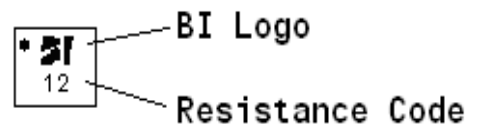
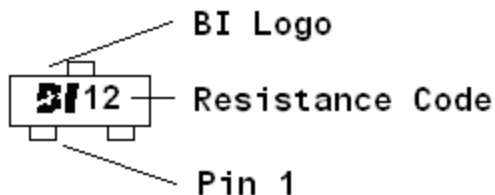
Packaging Option (Qty/reel)  
7=7" Tape & Reel (1000 pcs)  
13 = 13" Tape & Reel (3000 pcs)

Lead Finish:  
No Code=SnPb  
LF=Lead Free (RoHS)

TCR Code:  
TCR table

Tolerance Code:  
Resistance tolerance table

## TYPICAL MARKING



<sup>3</sup> Contact our customer service for custom designs and features.