

Chip POSISTOR®

PRF18 series for Overheat Sensing

(0603 size)



PRF



Part Number	Charac.	Resistance (at +25deg.C)	Sensing Temp. (at 4.7 kohm)	Sensing Temp. (at 47 kohm)	Maximum Voltage	Operating Temp.
PRF18AS471QB1RB *	AS	470 ohm +/-50%	145 +/- 5 deg.C	--	32 VDC	-20 to +160 deg.C
PRF18AR471QB1RB *	AR		135 +/- 5 deg.C	150 +/- 7 deg.C		-20 to +160 deg.C
PRF18BA471QB1RB *	BA		125 +/- 5 deg.C	140 +/- 7 deg.C		-20 to +150 deg.C
PRF18BB471QB1RB *	BB		115 +/- 5 deg.C	130 +/- 7 deg.C		-20 to +140 deg.C
PRF18BC471QB1RB *	BC		105 +/- 5 deg.C	120 +/- 7 deg.C		-20 to +130 deg.C
PRF18BD471QB1RB *	BD		95 +/- 5 deg.C	110 +/- 7 deg.C		-20 to +120 deg.C
PRF18BE471QB1RB *	BE		85 +/- 5 deg.C	100 +/- 7 deg.C		-20 to +110 deg.C
PRF18BF471QB1RB	BF		75 +/- 5 deg.C	90 +/- 7 deg.C		-20 to +100 deg.C
PRF18BG471QB1RB	BG		65 +/- 5 deg.C	80 +/- 7 deg.C		-20 to +90 deg.C
PRF18BB471RB1RB	BB		470 ohm +/-50%	115 +/- 3 deg.C		--
PRF18BC471RB1RB	BC	105 +/- 3 deg.C		--	-20 to +120 deg.C	
PRF18BD471RB1RB	BD	95 +/- 3 deg.C		--	-20 to +110 deg.C	
PRF18BE471RB1RB	BE	85 +/- 3 deg.C		--	-20 to +100 deg.C	

* : certified by UL (file : UL1434)

**Best fitting
for SII S-8264A !**

Part Number	Charac.	Resistance (at +25deg.C)	Sensing Temp. (at 4.7 Mohm)	Maximum Voltage	Operating Temp.
PRF18BA103QB1RB	BA	10 kohm +/-50%	130 +/- 5 deg.C	32 VDC	-20 to +140 deg.C

Data here are reference only. Specification available upon request. Products to be evaluated, confirmed by the user before actual use. Description here may be revised without notice.

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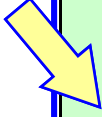
Chip POSISTOR®

PRF15 series for Overheat Sensing

(0402 size)



Best fitting
for SII S-8264A!

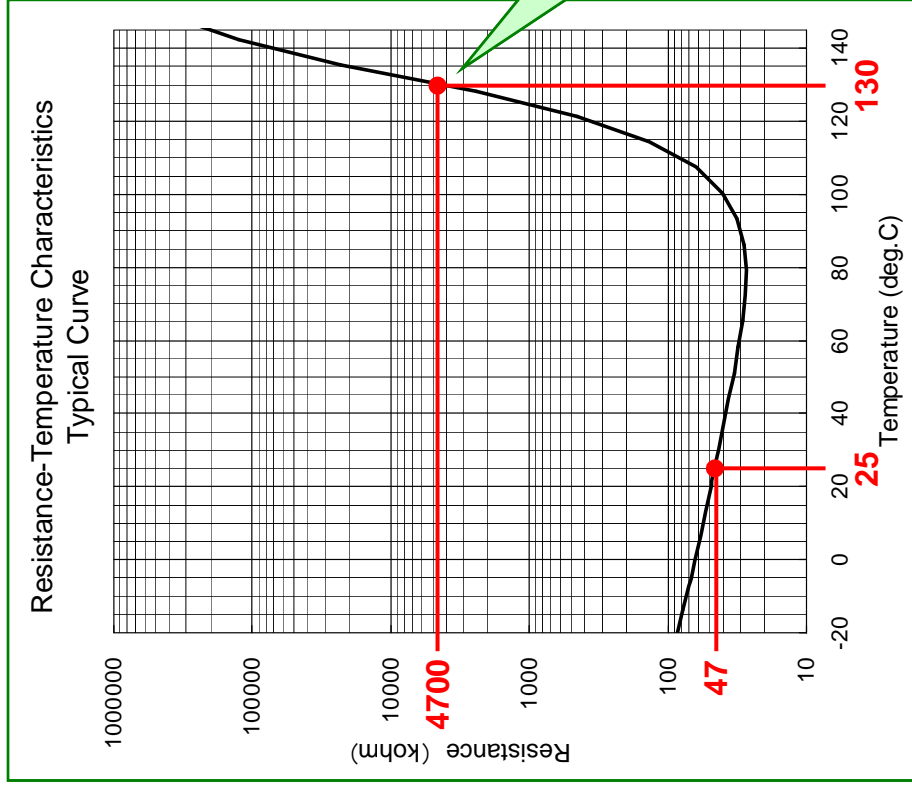


Part Number	Charac.	Resistance (at +25deg.C)	Sensing Temp. (at 4.7 Mohm)	Maximum Voltage	Operating Temp.
<u>PRF15BB103RB6RC</u>	BB		130 +/- 3 deg.C		-20 to +140 deg.C
<u>PRF15BE103RB6RC</u>	BE	10 kohm +/-50%	100 +/- 3 deg.C	32 VDC	-20 to +110 deg.C
<u>PRF15BG103RB6RC</u>	BG		80 +/- 3 deg.C		-20 to +90 deg.C

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Resistance-Temperature Characteristics of PRF18BA473QB1RB



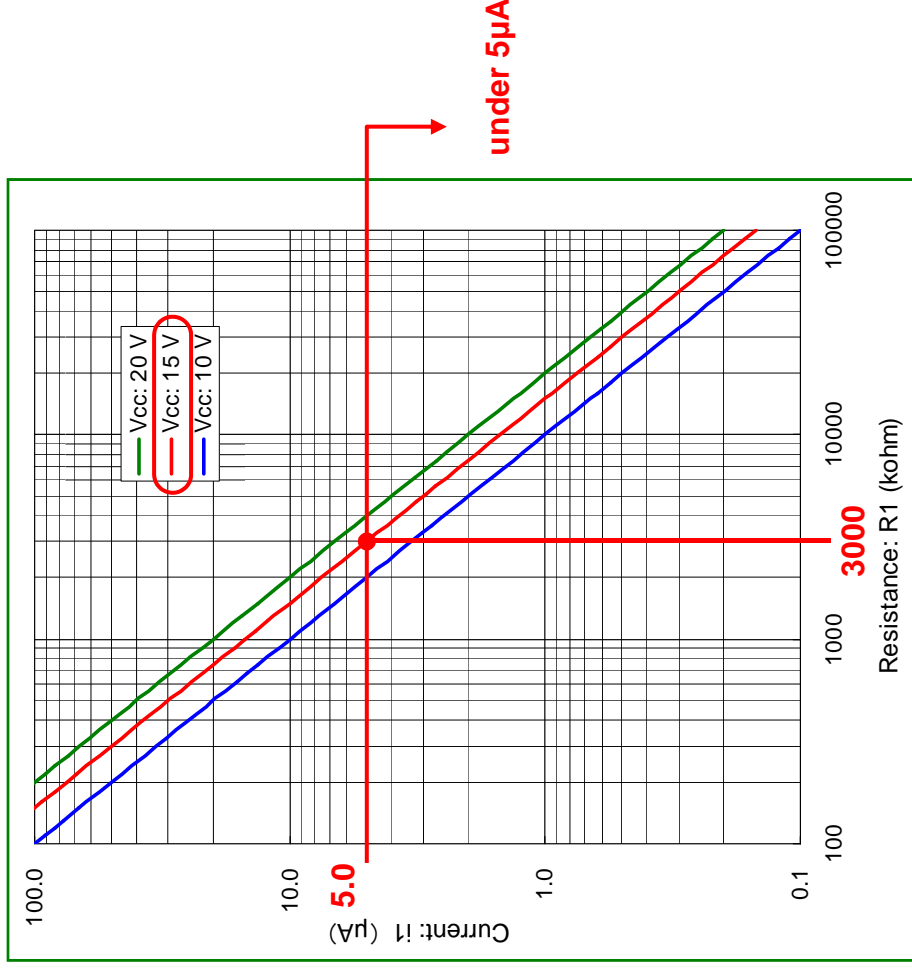
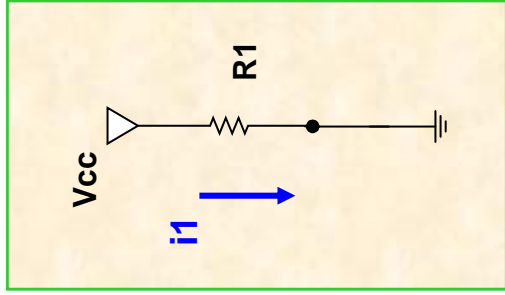
Resistance at 25deg.C:
47 kohm +/-50%

Sensing Temp. (at 4.7 Mohm):
130 +/- 5 deg.C

PRF

The Sensing Resistance at 130deg.C is 4.7Mohm, such high resistance provides low current consumption of the Overheat Sensing Circuit.

How Much Resistance Needs ?



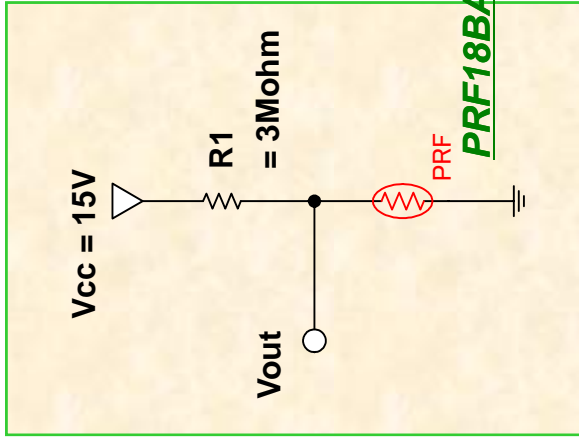
Resistor (R1) has to be more than 3Mohm, in order to keep the current (i1) under 5µA when 15V of voltage is applied.

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Output Voltage (Vout) Simulation

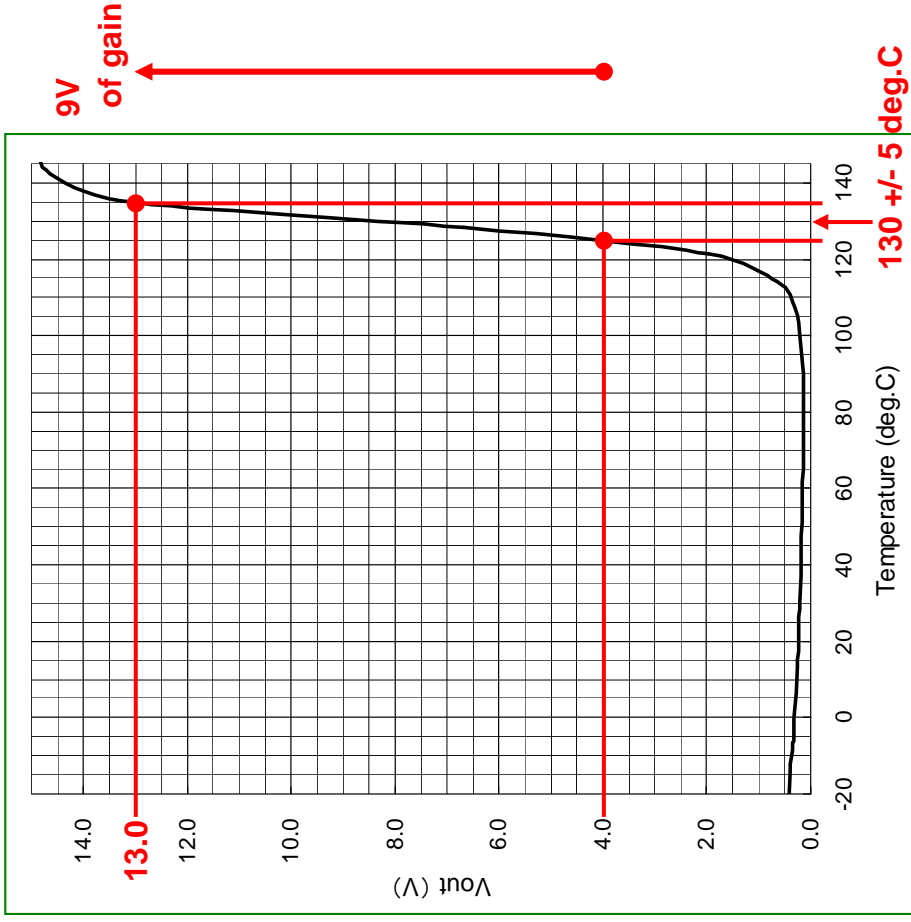


at Overheat Sensing Circuit, using [PRF18BA473QB1RB](#)



PRF

This circuit can output approx. 9V of voltage gain from 125 deg.C to 135 deg.C.



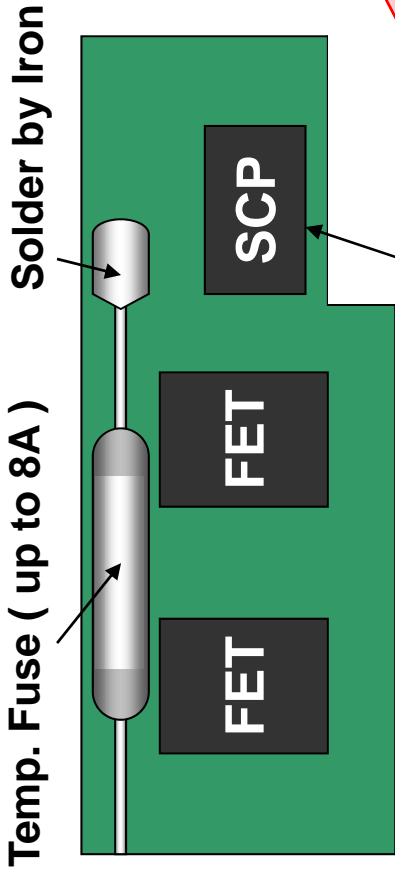
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Features of Chip POSISTOR®



instead of Temp. Fuse

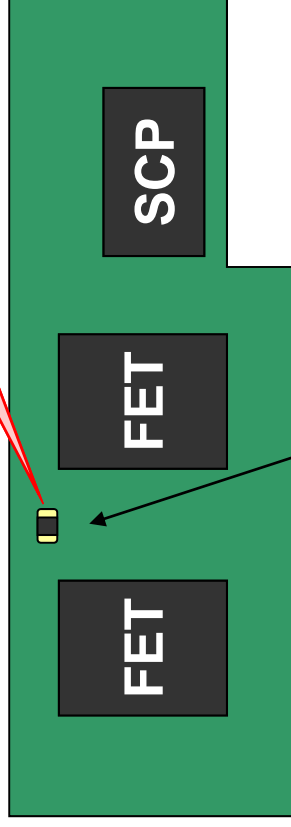
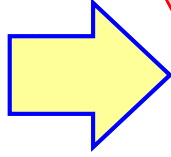


SC Protector

PRF

Chip POSISTOR®: **PRF** provides...

- # Surface mounting on board
- # Downsizing: area & height
- # Total cost saving



Chip POSISTOR®:
PRF series

Using with **SC Protector**,
the secondary protection circuit;
Over-current protection
Overcharge protection
& **Overheat protection** of FETs,
is fully completed !!