



# Design Solution # 23

## Sipex replacement for MAX803/809/810 3 pin Microprocessor Reset Circuits

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**Designed by:** Mark Boermeester (mboermeester@sipex.com)

**Part Number:** SP809, SP809N and SP810

**Application Description:** Replace MAX803/809/810 with Sipex solution

### Comparison of Sipex and Maxim Solution:

Sipex offers the SP809, SP809N and SP810 as a direct replacement for the MAX803, MAX809 and MAX810 devices. However, there are some minor differences in specifications that may or may not impact the Sipex part as being a drop in replacement.

- 1) The first specification difference is the operating temperature range. The Maxim device offers a temperature range of  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  while the Sipex solution offers a  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  temperature range.
- 2) The second specification difference is that some Reset Threshold levels have a 20 to 30mV difference. A complete listing of available typical Reset Thresholds is listed below for comparison.
- 3) The last concern for a Sipex replacement is the package. The Sipex solution is restricted to the SOT-23 3 pin package while the Maxim device is offered in both a SOT-23 and SC70-3 package. The Sipex SOT-23 package is pin compatible to the Maxim SOT-23 package. The package code for Maxim part number is "EXR" for SC70-3 and "EUR" for SOT-23. The Sipex package code for SOT-23 package is "EK"

### Reset Threshold Comparison

#### MAX8xx\_EUR

"\_" indicates threshold code

Code	Threshold
L	4.63V
M	4.38V
J	4.0V
T	3.08V
S	2.93V
R	2.63V

#### SP8xxEK-?-?

"?-?" indicates threshold code

Code	Threshold
-4-6	4.6V
-4-4	4.4V
-4-0	4.0V
-3-1	3.1V
-2-9	2.9V
-2-6	2.6V

## Reset Output Type

Maxim	Reset Output Type	Sipex
MAX803	Open-Drain Active Low	SP809N
MAX809	Push-Pull Active Low	SP809
MAX810	Push-Pull Active High	SP810

## Cross Reference List with Noted Differences from Above

Maxim	Sipex
MAX803LEUR	SP809NEK-4-6
MAX803MEUR	SP809NEK-4-4
MAX803JEUR	SP809NEK-4-0
MAX803TEUR	SP809NEK-3-1
MAX803SEUR	SP809NEK-2-9
MAX803REUR	SP809NEK-2-6
MAX809LEUR	SP809EK-4-6
MAX809MEUR	SP809EK-4-4
MAX809JEUR	SP809EK-4-0
MAX809TEUR	SP809EK-3-1
MAX809SEUR	SP809EK-2-9
MAX809REUR	SP809EK-2-6
MAX810LEUR	SP810EK-4-6
MAX810MEUR	SP810EK-4-4
MAX810JEUR	SP810EK-4-0
MAX810TEUR	SP810EK-3-1
MAX810SEUR	SP810EK-2-9
MAX810REUR	SP810EK-2-6