

CMOS COMPARATOR

1 Circuit S-89210A/89220A
 2 Circuits S-89210B/89220B

► Under development

The mini analog series is a family of ICs that integrate general-purpose analog circuits in ultra-small packages.

The S-89210/89220 is a CMOS type comparator with a wide operating voltage range and ultra-low current consumption.

The S-89210/89220 provides the best solution for battery-powered portable equipment.

■ PRODUCT LIST

Package	SC-88A (1 circuit is mounted)	8-pin MSOP (2 circuits are mounted)
I _{DD} = 50µA typ.	S-89210ACNC-1C0-TF	S-89210BC-K8T1 (under development)
I _{DD} = 10µA typ.	S-89220ACNC-1C1-TF	S-89220BC-K8T1 (under development)

■ SPECIFICATIONS

T_a = 25°C, typ.

Product name	S-89210ACNC		S-89220ACNC	
	10 V			
Absolute maximum rating	10 V			
Operation temperature range	-40 to +85°C			
Package	SC-88A		SC-88A	
Operating voltage	1.8 to 5.5 V			
Power supply voltage VDD	At 1.8 V	At 3.0 V	At 1.8 V	At 3.0 V
Current consumption	50 µA typ.	50 µA typ.	10 µA typ.	10 µA typ.
Input offset voltage	4 mV max.	4 mV max.	4 mV max.	4 mV max.
Common-mode input voltage range	0 to 1.1 V	0 to 2.3 V	0 to 1.1 V	0 to 2.3 V
Maximum output voltage swing (V _{OH})	1.5 V min.	2.7 V min.	1.5 V min.	2.7 V min.
Source current (V _{OUT} = 0 V)	100 µA min.	120 µA min.	20 µA min.	25 µA min.
Sink current (V _{OUT} = 0.5 V)	5 mA min.	8 mA min.	5 mA min.	8 mA min.
Rise propagation delay time	20 µs	30 µs	100 µs	150 µs
Fall propagation delay time	5 µs	6 µs	25 µs	30 µs
Output rise time	1.2 µs	2 µs	6 µs	10 µs
Output fall time	1.2 µs	2 µs	6 µs	10 µs

■ FEATURES

- Low voltage operation: V_{DD} = 1.8 to 5.5 V
- Low current consumption: I_{DD} = 50 µA (S-89210ACNC)
I_{DD} = 10 µA (S-89220ACNC)
- Low input offset voltage: 4.0 mV max.
- Small package: SC-88A
8-pin MSOP (under development)

■ APPLICATIONS

- Cellular phones, PDAs, cameras, digital still cameras, camcorders, notebook PCs

■ PIN CONFIGURATION

