

RHFAD128

Rad-hard, 12-bit, 1 Msps successive approximation ADC



QML-V qualified, precision ADC for Space applications

Offering superior robustness in radiation as well as the possibility of single and differential input implementation, the RHFAD128 is pin-to-pin compatible with existing 12-bit ADC on the market. Its full CMOS 130nm technology, proven in Space and in high volumes, makes the RHFAD128 very suitable for precision systems in harsh environments. The RHFAD128 comes in a hermetic ceramic Flat-16 package with an upper metallic lid internally connected to ground to sink accumulated charges.

KEY FEATURES

- Effective number of bits: 11.5 (typ.), 11.1 (min.)
- ± 2 LSB Offset Error
- 4.5 mW consumption (max.)
- 2.7V to 3.6V I/Os
- Successive Approximation Architecture
- 50 kbps to 1 Msps sample rate
- SPI compatible
- -55 to $+125$ °C ambient operating range

BENEFITS

- Best-in-class 300 krad (Si)
- Single-ended inputs (8-channel MUX)
- Differential inputs (4-channel MUX)
- Grounded lid

RADIATION HARDENED

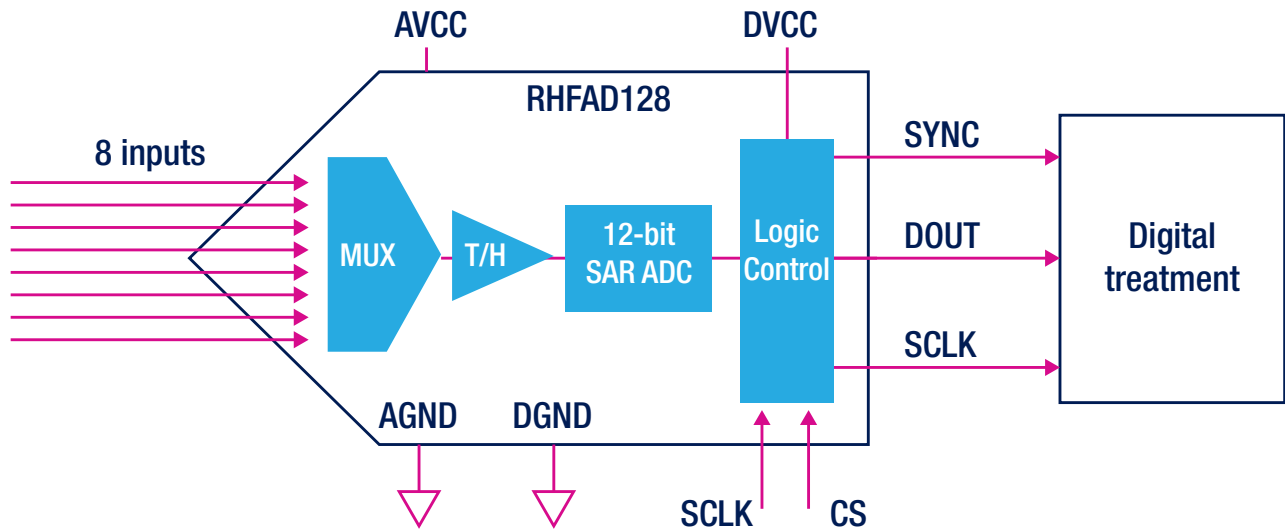
- TID : 300 krad (Si)
- SEL-free up to 125 MeV.cm²/mg, 125 °C
- SEU-free up to 32 MeV.cm²/mg, 25 °C

KEY APPLICATIONS

- Analog multiplexing and conversion in space and harsh environments
- Telemetry
- Housekeeping



RHFAD128 BLOCK DIAGRAM



DEVICE SUMMARY

Sales Type	Quality Level	SMD	Package	Packing
RH-AD128KX	Prototype	-	FLAT-16	Strip pack
RH-AD128K1	Engineering Model	-	FLAT-16	Strip pack
RHFAD128K01V	QML-V Flight	5962F18204	FLAT-16	Strip pack

