endrich news

Our Product of the Month

Modules for GSM/GPRS-,UMTS-, LTE-Technology

- Wireless modules, in partucular for the Internet of Things (IoT) market
- Mini PCIe or M.2 card format
- LGA format for SMD soldering
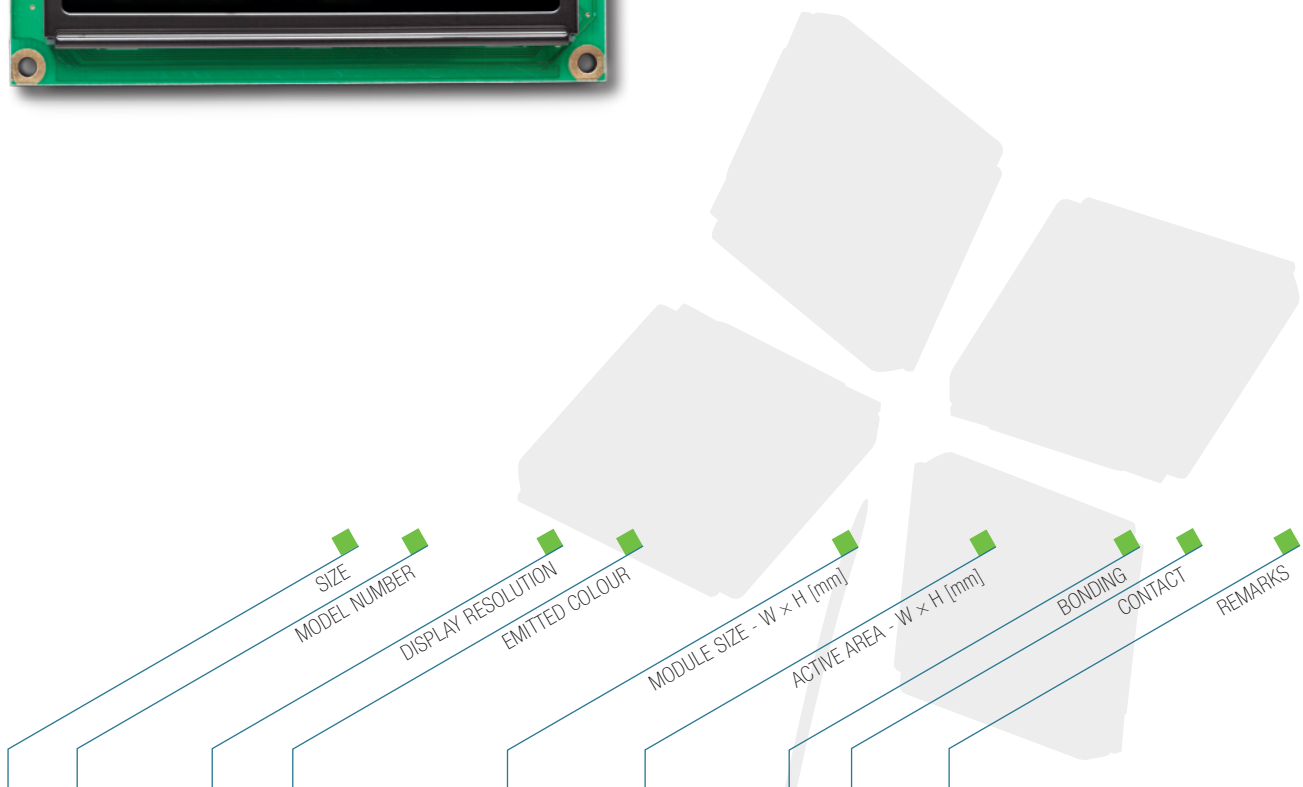- Download rate up to 300 Mbps
- Fast time-to-market

Fibocom

Innovative Wireless Modules

OLED-DISPLAYS, ALPHANUMERIC

Raystar Optronics was founded in Taiwan in 2007 and has become specialized in the manufacture of alphanumeric and graphic standard OLED displays and monochrome LC modules.
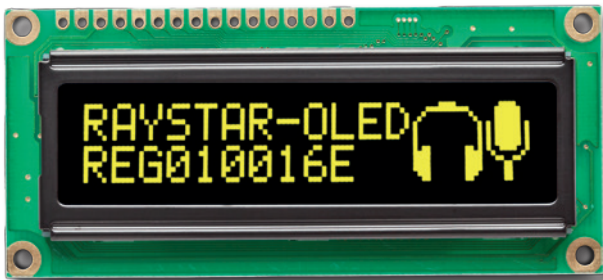
OLED-DISPLAYS, ALPHANUMERIC

SIZE	MODEL NUMBER	DISPLAY RESOLUTION	yellow	white	green	blue	red	MODULE SIZE - W × H [mm]	ACTIVE AREA - W × H [mm]	BONDING	CONTACT	REMARKS
1.2''	REC000802A	8 x 2	•	•	•	•	•	58.00 x 32.00	28.16 x 11.86	COB	pin connector	Alphanumeric OLED
1.6''	REC001202A	12 x 2	•	•	•	•	•	55.70 x 32.00	38.95 x 11.80	COB	pin connector	Alphanumeric OLED
2.29''	REC001602A	16 x 2	•	•	•	•	•	80.00 x 36.00	56.95 x 11.85	COB	pin connector	Alphanumeric OLED
2.29''	REC001602E	16 x 2	•	•	•	•	•	84.00 x 44.00	56.95 x 11.85	COB	pin connector	Alphanumeric OLED
3.67''	REC001602B	16 x 2	•	•	•	•	•	122.00 x 44.00	91.14 x 18.98	COB	pin connector	Alphanumeric OLED
3.08''	REC002002A	20 x 2	•	•	•	•	•	116.00 x 37.00	77.30 x 11.85	COB	pin connector	Alphanumeric OLED
2.88"	REC002004A	20 x 4	•	•	•	•	•	98.00 x 60.00	70.16 x 20.95	COB	pin connector	Alphanumeric OLED
2.26"	REX001602C	16 x 2	•	•				68.5 x 17.5	56.22 x 13.52	COG	solderable	Alphanumeric OLED
2.93"	REX002002A	20 x 2	•	•				84.5 x 19.28	75.52 x 13.52	COG	solderable	Alphanumeric OLED
2.89''	REX002004C	20 x 4	•					84.50 x 27.50	70.42 x 20.82	COG	solderable	Alphanumeric OLED

Reserve technical changes!

Contact for information: Mr. Bauer· Tel. +49(0)7452-6007- 50 · e-mail: j.bauer@endrich.com

OLED-DISPLAYS, GRAFIC

SIZE	MODEL NUMBER	DISPLAY RESOLUTION	EMITTED COLOUR					MODULE SIZE - W × H [mm]	ACTIVE AREA - W × H [mm]	BONDING	CONTACT	REMARKS
			yellow	white	green	blue	red					
0.95''	REX009664A	96 x 64	•	•	•	•		24.90 x 22.95	19.946 x 13.418	COG	solderable	
0.96''	REX012864D	128 x 64	•	•		•		26.70 x 19.26	21.738 x 10.858	COG	solderable	Option ZIF
1.54''	REX012864B	128 x 64	•	•		•		45.24 x 29.14	35.056 x 17.52	COG	ZIF	
1.6''	REX012864F	128 x 64	•	•	•			41.80 x 27.90	36.45 x 18.21	COG	ZIF	
2.23"	REX012832A	128 x 32	•	•	•	•		62.00 x 24.00	55.018 x 13.098	COG	ZIF	
2.36"	RET012864E	128 x 64	•	•	•	•		75.00 x 52.70	53.73 x 26.85	TAB	pin connector	incl. PCB
2.36"	RET012864F	128 x 64	•	•	•	•	•	60.50 x 37.00	53.73 x 26.85	TAB	ZIF	
2.42"	REX012864G	128 x 64	•	•	•			60.50 x 37.00	55.01 x 27.49	COG	ZIF	
2.42"	REX012864H	128 x 64	•	•	•			60.50 x 37.00	55.01 x 27.49	COG	solderable	
2.42"	REX012864J	128 x 64	•	•				75.00 x 52.70	55.01 x 27.49	COG	pin connector	incl. PCB
2.7"	REX012864K	128 x 64	•	•				73.00 x 41.86	61.41 x 30.69	COG	ZIF	
2.7"	RET012864C	128 x 64	•		•	•		89.70 x 47.20	61.41 x 30.69	TAB	ZIF	incl. frame
2.7"	RET012864D	128 x 64	•	•	•			73.00 x 41.86	61.41 x 30.69	TAB	ZIF	
2.8"	RET025664A	256 x 64	•		•	•	•	84.00 x 25.80	69.098 x 17.258	TAB	ZIF	
3.12"	RET025664B	256 x 64	•	•	•			88.00 x 27.80	76.778 x 19.178	TAB	ZIF	
3.2"	RET025664C	256 x 64	•	•				87.40 x 28.50	79.089 x 19.756	TAB	ZIF	
5.5"	RET025664D	256 x 64	•		•			146.00 x 45.00	135.65 x 33.89	TAB	ZIF	

Reserve technical changes!

Contact for information: Mr. Bauer· Tel. +49(0)7452-6007- 50 · e-mail: j.bauer@endrich.com

433 MHZ KEY FOB WITH KEELOQ® ENCODER – TX HCS UP 434 REM

AUREL S.p.A., leader into "LOW POWER" RF devices developed a new generation of handheld transmitter for the license free 433 MHz ISM Band.

The RF keyfob transmitter with SAW filter oscillator used HCS Keeloq® encoding and is available as 1,2 or 4 channels (push button combination) versions. Standard color used for the enclosure is black or white. Protection bumper in solid plastic or polished chromed metal. LED aperture on the cover indicate the transmission. Closing by one screw.

High efficiency and low spurious emission guarantee the compliance with European Normative.
On demand Wall mounting element and belt clip as accessories are available. As well as a glowing in the dark frame, cool, funny and useful: it catches the sunlight and releases it in the dark.
Last but not least on demand a "TX-Copiatore" hand held transmitter (keyfob) with up to 4 buttons working in 433 MHz is available. This special transmitter offers the function to learn and use the code from other remote controls (fixed code type or the fix part of a HCS rolling code Transmitter).

Ideal for application as door/garage door, car alarms, home alarm Systems, access control, remote control systems.

ABMESSUNGEN (mm)

39.3   11.5   71.5
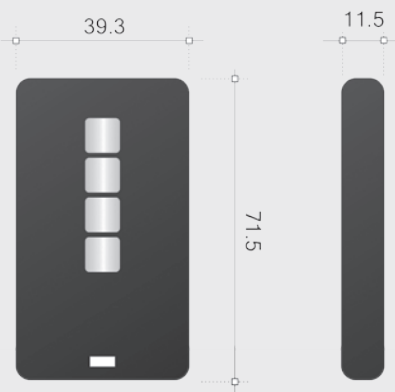
SPECIFICATIONS

PARAMETER	MIN	TYP	MAX	UNIT
TX HCS UP 434 REM				
Battery supply		3		V_{DC}
Current consumption		10		mA
RF Carrier frequency		433.92		MHz
Effective radiated power			1	mW
Programmable baud rate		3300		bit/s
Serial ID Code		28		bit
Hopping Code		32		bit
Security combinations		2^{32}		bit
Operating temperature range	+10		+55	°C
Battery type		CR2032		

GSM-, UMTS- AND LTE-MODULES

Before the Embedded World Exhibition 2016 Endrich Bauelemente GmbH have extend the product portfolio with the Franchise of Fibocom Wireless Inc..
Fibocom is one of the worldwide leaders of products in the M2M and telecommunication market.

The company is specialized in the design and manufacture of wireless modules, in particular for the Internet of Things- (IoT) market. The modules of the technologies GSM/GPRS, UMTS and especially LTE with a maximum download speed up to 300 Mbps are perfect for a secure communication between machines and creating a infrastructure, where a WiFi topology is not available.

Other uses include applications such as tracking and traceing, the automotive sector, security systems, gateways, routers and mobile computers for the industry.

Fibocom Wireless Inc. is certified with TS16949, what is a indicator for high quality products and a long lifetime of the derivates.

The modules and evaluation kits are available from Endrich Bauelemente GmbH stock in Nagold, Germany.

The comprehensive documentation you can find there:
http://www.endrich.com/de/filter_quarze_antennen_funkmodule_nfc_wpc-funkmodule_+_gps_gnss-gsm_lte

The specialists of our technical product marketing/application engineers will be happy to support you meanwhile the design phase of the application.

ARE YOUR APPLICATIONS REALLY AVAILABLE EVERYWHERE?

Fibocom present a high product portfolio for the technologies GSM/GPRS, UMTS and LTE.

For example LTE modules of the L810 and L831 series with following features:

» SMD soldering modules
» Mini PCIe or M.2 - card format
» Download rate up to 300 Mbps
» Temperature range from -40°C up to +85°C
» Drivers for several Windows applications, Linux and Android available
» Interfaces to the Host via USB, I"C, I²S or UART
» Certified acc. to CE, FCC, PTCRB, GCF and NCC
» Significant fast time-to-market due to short evaluation time
» Long-term availability of the modules, long-life cycle of the modules

MEMS SUPER-TCXO SIT156X & SIT157X FOR WEARABLES, IoT, MOBILE

SiTime, sales by Endrich, announces a new family of Super TCXO (SiT156x / 7x). The smallest (1.5 mm×0.8 mm) and accurate (±5 ppm)timing solutions, that are primarily used in wearables, IoT and mobile products and allow through your precision there longer battery life. This ultra small silicon MEMS Super TCXO are particularly suitable for use in SIP (Session Initiation Protocol) modules and include an innovative in-system auto-calibration function. This allows the subsequent calibration of inaccuracies after the system installation, for example, after soldering or molding of the application. In addition to 32 kHz Super-TCXO (SiT156x) developed SiTime oscillators with optional factory-programmable frequencies from 1 Hz to 1 MHz (SiT157x) for low-power RF and wireless charging applications.

How does SiTime achieve such accuracy, small size, and low power?

SiTime's TempFlat MEMS™ technology enables extremely small silicon MEMS resonators, which are 0.4 mm x 0.4 mm in size. These resonators are mated with sophisticated, low-power, mixed-signal PLL technology, with an accurate temperature sensor and compensation circuitry. The complete system of MEMS and programmable analog forms the Super-TCXO that is finely tuned to provide the best accuracy, smallest size, and lowest power.

FEATURES/BENEFITS

» Smallest timing solution: 1.5 mm×0.8 mm×0.6 mm CSP
» Extreme accuracy: ± 5 ppm (-40°C … + 85°C)
» In-system auto-calibration function
» Multiple loads (ICs) controlled
» Competitive priced
» Usage saves space and cost
» Samples available, mass production in Q2/2016

APPLICATIONS

» Low Power RF applications as Bluetooth, Bluetooth Low Energy (BLE), WiFi
» Sport- and leisure equipment (health/wellness monitors)
» Industrial instrumentation and diagnostic equipment
» Devices with critical power consumption

MOST ACCURATE SUPER TCXO

SiT1532 XO (March 2013)
100 ppm over Industrial Temp

2x More accurate than quartz XTAL
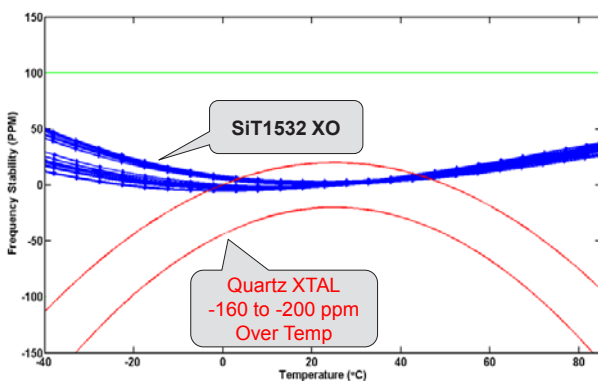
SiT156x/7x Super-TCXO
±5 ppm over Industrial Temp

30x – 40x more accurate than quartz XTAL
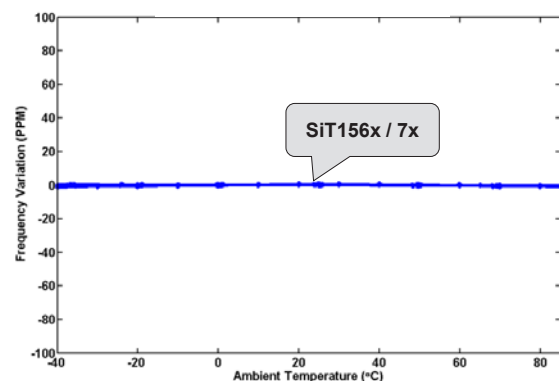
µPOWER OSCILLATOR – SIT8021/1 MHz ~ 26 MHz/SMALL AND ECONOMICAL

µPower Oscillator
SiT8021 1-26 MHz

Der SiT8021-µPower Oszillator eignet sich für Applikationen, die eine lange Batterielebensdauer und geringen Platzbedarf fordern.

1.5 x 0.8 mm

60 µA

The new **µPower MEMS oscillators** from SiTime suitable for Wearable-, IoT and mobile market. The SiT8021 is the first product in this family, and clearly takes less power, is smaller and weighs less than conventional crystal oscillators.

The MEMS oscillator SiT8021 was voted by the readers of elektroniknet.de a Product of the Year 2016th:

An optimized low-power frequency synthesizer and an analog circuit control the TempFlat MEMS resonator which is programmed at the factory to the desired frequency with a current consumption in the uA range. In power sensitive applications, a resonator MHz / quartz replaced by this µPower oscillators and the on-chip oscillator circuit to be switched off on the MCU or the SoC, whereby a significant power saving is achieved.

POWER SAVING BY SiT8021
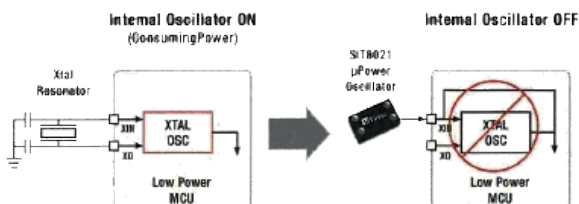
The SiT8021 µPower oscillator is directly connected to the X-IN pin. This allows the internal on-chip XTAL OSC circuit bypass, resulting in power savings oscillator plus MCU by about 7% in the active and 18% in standby mode.
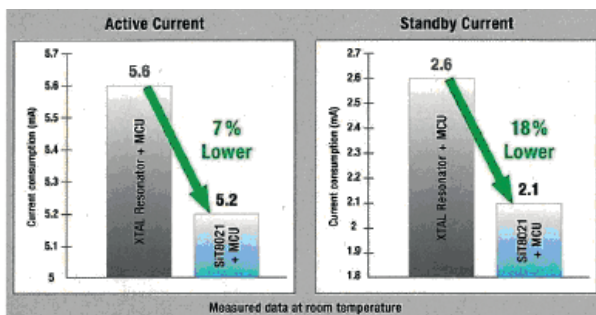
In a portable audio application example. requires the SiT8021 MEMS oscillator at 3.072 MHz only 60 µA compared with a quartz oscillator which is 2.5 to 3 mA, meaning power savings of 98%. These enormous savings extended battery life effectively by almost a whole day.

A further advantage of using a MEMS oscillator is its ability to drive multiple loads, which is not possible with a XTAL.
When controlling more than one load (IC), the power consumption increases in the oscillator only slightly.
When the clock generators may be omitted in the application (eg. as for MCU and audio DAC), this increases the energy savings in the system on.
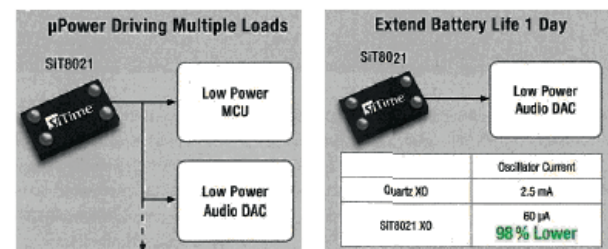
In addition to the low performance of µPower oscillator needs with its dimensions of 1,5 mm×0,8 mm less space on the board. This is an important benefit, because many applications with the demand for low power consumption must be accommodated even in smaller packages simultaneously.

THE SIT8021 DELIVERS THE FOLLOWING FEATURES AND BENEFITS AS COMPARED TO QUARTZ TECHNOLOGY.

- » 100 µA supply current , 90% power saving
- » Ultra small 1,5 mm×0,8 mm housing, 40% smaller
- » Weight of 1,28 mg, 70% lighter
- » Height of 0,55 mm, 45% thinner
- » 1 to 26 MHz to 6 decimal places accuracy
- » Operating temperature from -40°C to + 85°C
- » ±100 ppm frequency stability
- » 1,8 V operation for battery powered applications
- » Unique, programmable output drive strength for best EMI or driving multiple loads
- » 30 times higher reliability with 114 Mio h MTBF (<1 FIT)
- » 30 times higher shock and vibration resistance

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THIN FILM PRECISION RESISTOR NETWORKS – RM SERIES
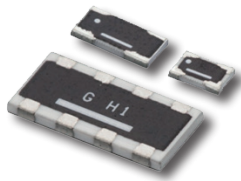
Susumu thin film resistor networks RM series are thin film resistor networks that offer all the known features of the thin film single chip resistors (Susumu RG series), such as very tight tolerance and small temperature drift, excellent stability, low noise in high frequency applications and high temperature operation. It has the additional feature that resistance ratio matching is defined. Possible ratios reach from 1:1 up to 1:500 which are very difficult to realize in high precision with single chip resistors.

FEATURES

- » Case sizes from 0805 up to 2512
- » Available ratios: 1:1 ... 1:500
- » Resistance values: 100 Ω ... 500 kΩ
- » Ratio tolerances: 0.5% ... 0,01%
- » Ratio TCR: 1 ppm/°C ... 5 ppm/°C
- » Operating temperature range: -55°C ...+155°C
- » Custom values (outside E96) and housings available unmatched reliability and stability
- » AEC-Q200 certified

APPLICATIONS

RM networks are excellent suitable as voltage divider or for measurement and feedback circuits at different branches.

AVAILABLE STANDARD CIRCUITS
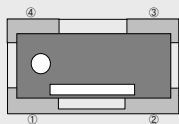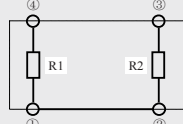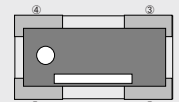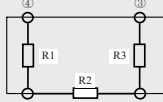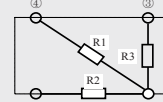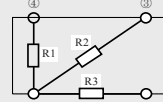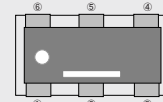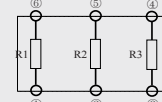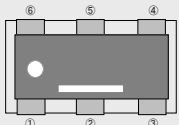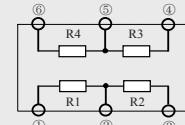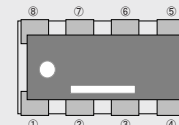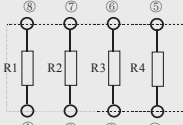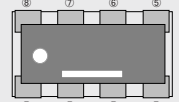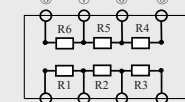
Please contact us for any special solutions such as resistance values, combinations, number of elements, size, etc.

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