Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

Atmel
AT88SC0808CRF-MY1

For any questions, you can email us directly:
sales@integrated-circuit.com

Distributor of Atmel: Excellent Integrated System Limited
Datasheet of AT88SC0808CRF-MY1 - IC EEPROM 8KBIT 13MHZ TAG

CRYPTORF® TAGS

↗ CryptoRF® World's Largest Family of Secure RF Memories

CryptoRF® supports the most stringent security standards used for product authentication, contactless payment, patient safety, anti-cloning of consumables, loyalty and patron management.

The CryptoRF transponder and CryptoRF reader pair offer a full RFID secure authentication solution for embedded and non-embedded applications. CryptoRF is a 13.56 MHz RFID device family with a 64 bit embedded hardware encryption engine and dual authentication capability. Based on the royalty free ISO 14443 Type B standard, CryptoRF is ideally suited to meet a variety of security applications such as product authentication, contactless payment, patient safety, anti-cloning of consumables, loyalty and patron management. CryptoRF devices are great for proximity applications where hardware security is desired or when environmental factors such as dirt, moisture, and chemicals exist.

CryptoRF devices are available with EEPROM densities from 4 Kbit to 64 Kbit of user memory to accommodate a wide range of information storage and cost requirements. The user memory is divided into 4, 8 or 16 separate sections, each of which can be customized to allow different levels of read and write access, including:

- Open access
- Password protection
- Authentication
- Data encryption and message authentication codes (MAC)

These user selectable optional security features give customers tremendous flexibility in developing and deploying a secure RF solution. CryptoRF is deliverable as complete RFID tags, modules, and thinned wafers for creation of complete RFID tags and cards.

Highlights: Stream encryption ensuring data privacy, multiple key sets for authentication and encryption, encrypted passwords with attempt counters, selectable access rights by zone, tamper sensors, compliant with industry standards.

Advantages of Using Epoxy Glass: High reliability, long life (10 years or more in most applications), corrosion and moisture resistant.

Advantages of Using PET (Polyethylene Terephthalate): Great option for labels with flexible attachment options and graphic integration possibilities. Available in printable surface and adhesive back options.

MY1 Epoxy Glass
17mm thin profile
round tag transponders

MECHANICAL

Parameter	Typical Value	Units
Substrate	Epoxy Glass	-
Substrate Thickness	110	µm
Track	Cu with Ni+Au plating	-
Center Hole Diameter	3	mm
Max Operating Distance*	7 to 15	mm
Typical Punched Outer Dimension	17.0 diameter	mm
Maximum Thickness	0.6	mm

*Communication range is dependent on the reader antenna design.

ELECTRICAL

Parameter	Typical Value	Units
Resonance Frequency, f_0	14.0	MHz
Write Endurance	100,000	Cycles
Data Retention	10	Years

TEMPERATURE

Parameter	Range	Units
Storage	-40° to +85°	Celsius
Operating	-25° to +70°	Celsius

Delivery Option
35mm Tape

MX1 Epoxy Glass
13mm thin profile
square tag transponders

MECHANICAL

Parameter	Typical Value	Units
Substrate	Epoxy Glass	-
Substrate Thickness	110	µm
Track	Cu with Ni+Au plating	-
Center Hole Diameter	-	mm
Max Operating Distance*	5 to 13	mm
Typical Punched Outer Dimension	13.0 x 13.0	mm
Maximum Thickness	0.9	mm

ELECTRICAL

Parameter	Typical Value	Units
Resonance Frequency, f_0	14.5	MHz
Write Endurance	100,000	Cycles
Data Retention	10	Years

TEMPERATURE

Parameter	Range	Units
Storage	-40° to +85°	Celsius
Operating	-25° to +70°	Celsius

Delivery Option
35mm Tape

L02FG PET
20mm thin profile
square tag transponders

MECHANICAL

Parameter	Typical Value	Units
Substrate	PET	-
Substrate Thickness	36 to 75**	µm
Track	Al etched	-
Center Hole Diameter	N/A	
Max Operating Distance	10 to 20	mm
Typical Outer Dimension	25.0 x 25.0	mm

**Varies by substrate vendor

ELECTRICAL

Parameter	Typical Value	Units
Resonance Frequency, f_0	14.3	MHz
Write Endurance	100,000	Cycles
Data Retention	10	Years

TEMPERATURE

Parameter	Range	Units
Storage	-40° to +85°	Celsius
Operating	-20° to +70°	Celsius

Delivery Option
PET reel, PET sheet, PSA layer for 'peel and stick', Printed Graphic (Logo)
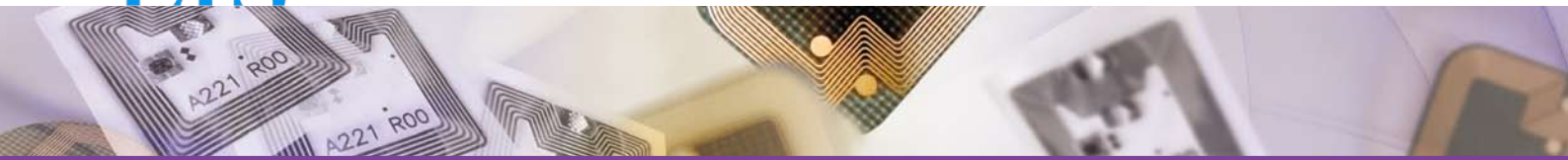
PRODUCTS

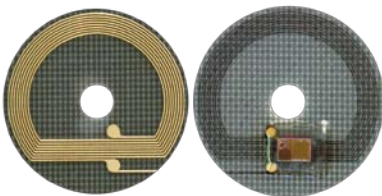| | Standard Tag Options | | | | Configuration | | | |
| | Epoxy Glass | | | PET | | | | |
Device	MY1	MX1	MVB1G	L02FG	Memory	User Memory	Zones	RF Protocol
AT88RF04C	✓	✓	✓	✓	2 Kbit	4 Kbit	4	ISO/IEC 14443 Type B
AT88SC0808CRF	✓	✓	✓		2 Kbit	8 Kbit	8	ISO/IEC 14443 Type B
AT88SC1616CRF	✓	✓	✓		2 Kbit	16 Kbit	16	ISO/IEC 14443 Type B
AT88SC3216CRF	✓	✓	✓		2 Kbit	32 Kbit	16	ISO/IEC 14443 Type B
AT88SC6416CRF	✓	✓	✓		2 Kbit	64 Kbit	16	ISO/IEC 14443 Type B
AT88RF1354 - Reader IC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ISO/IEC 14443 Type B

Target Applications: Anti-counterfeiting, clone prevention and authentication, IP and brand protection, energy metering and payments, medical, safety, and security.

CryptoRF is available in many different shapes and sizes. Specially designed CryptoRF tags in a variety of shapes can be developed for high volume applications.
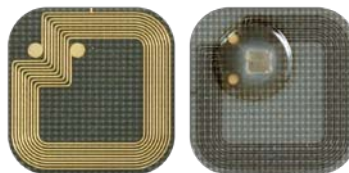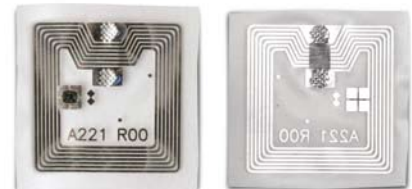
PET Antenna Construction

Etched antenna coils • Flip chip with bumps • Adhesive • Etched antenna coils • PET basefilm

MY1 Epoxy Glass
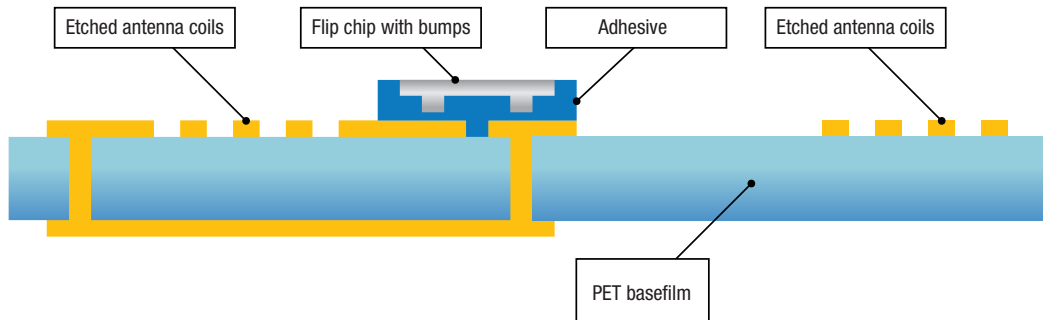
MX1 Epoxy Glass

L02FG PET

Delivery Format for MY1 Module

Delivery Format for MX1 Module

Miscellaneous Tag Formats

For free samples of the 4K device contact Atmel sales at www.atmel.com/contacts