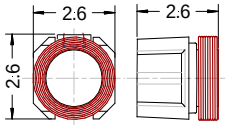
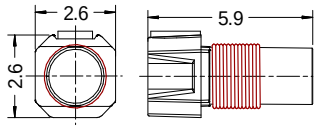
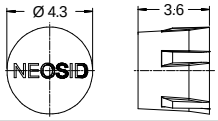
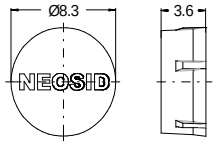
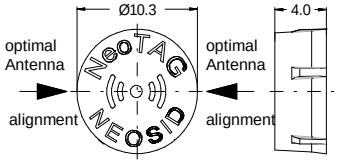
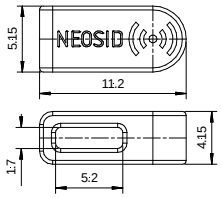
HF 13.56 MHz NEOTAG® Inlay/Plug/SMD/Flag

for metal and non metal objects

Applications

- Maintenance and service
- Tool management
- Identification of connectors and sockets; Smart Connect
- Production tracking
- Counterfeit protection
- Object identification in Industry 4.0

2018/2019 INNOVATIVE THROUGH RESEARCH Awarded by the Stifterverband NEO3474HAL

NeoTAG® Type		Part. No.	IC-Chip	Application	Mounting [mm]
NeoTAG® Inlay 2626 max. Size: **2.6 mm x 2.6 mm** 	 Weight: 0.04g/Piece	00 7040 30 00 7041 00 00 7042 30	SLIX SLIX-S EM4237	**F2626** non metal	Hole min. Ø2.7; t=2.7
		00 7040 31 00 7041 01 00 7042 31	SLIX SLIX-S EM4237	**MF2626** metal	Hole min. Ø3.5; t=2.7 NeoTAG centrally
NeoTAG® Inlay 2659 max. Size: **2.6 mm x 5.9 mm** 	 Weight: 0.08g/Piece	00 7050 32 00 7051 00 00 7052 30	SLIX SLIX-S EM4237	**F2659** non metal	Hole min. Ø2.7; t=6.2
		00 7050 31 00 7051 01 00 7052 31	SLIX SLIX-S EM4237	**MF2659** metal	Hole min. Ø10.0; t=6.2 NeoTAG centrally
NeoTAG® Plug 4335 max. Size: **Ø4.3 mm x 3.6 mm** 	 Weight: 0.09g/Piece	00 7040 32 00 7041 02 00 7042 32	SLIX SLIX-S EM4237	**FG4335** non metal	Hole Ø4.0±0.05 min. t=3.7 press fit case
		00 7040 33 00 7041 03 00 7042 33	SLIX SLIX-S EM4237	**MFG4335** metal	
NeoTAG® Plug 8336 max. Size: **Ø8.3 mm x 3.6 mm** 	 Weight: 0.20g/Piece	00 7040 38 00 7041 08 00 7042 38	SLIX SLIX-S EM4237	**FG8336** non metal **and** metal	Hole Ø8.0±0.05 min. t=3.7 press fit case
NeoTAG® Plug 10340 max. Size: **Ø10.3 mm x 4.0 mm** 	 Weight: 0.36g/Piece	00 7050 16	SLIX	**FG10340** non metal	Hole Ø10.0±0.05 min. t=4.1 press fit case
		00 7050 17	SLIX	**MFG10340** metal	
NeoTAG® Flag 5242 max. Size: **11.2 mm x 5.15 mm x 4.15 mm** 	 Weight: 0.26g/Piece	00 7040 90	SLIX	**FG5242** non metal **and** metal	Cable ties and more mounting elements up to 4.8 width or Ø 1.3

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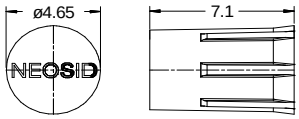
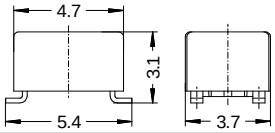
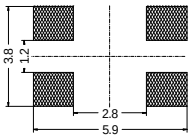
NeoTAG® Plug 4670 max. Size: **Ø4.7 mm x 7.1 mm** 	 Weight: 0.18g/Piece	00 7050 38 00 7051 02 00 7052 32	SLIX SLIX-S EM4237	**FG4670** non metal	Hole Ø4.3±0.05 min. t=7.1 press fit case
NeoTAG® SMD 4530 max. Size: **5.4mm x 3.7 mm x 3.1 mm** 	 Weight: 0.09g/Piece	00 7040 34 00 7041 04 00 7042 34	SLIX SLIX-S EM4237	**FG4530** non metal	 Solder areas - recommendation

Passive Transponder. RoHS-compliant.
Full automated production in Germany.
100% outgoing inspection of frequency and functionality.

Readable and writable by many smartphones with NFC function and app.

IC- Specifications

IC Type	**NXP ICODE SLIX** *1)	**NXP ICODE SLIX-S** *1)	**EM 4237** *2)
Supported Standards HF 13.56 MHz	***ISO/IEC 15 693***; ISO18000-3 Mode ***1*** with anti-collision algorithm. **NFC** Forum Type 5 TAG.	***ISO/IEC 15 693***; ISO18000-3 Mode ***1*** with anti-collision algorithm. **NFC** Forum Type 5 TAG.	***ISO/IEC 15 693***; ISO18000-3 Mode ***1*** with anti-collision algorithm. **NFC** Forum Type 5 TAG.
Security and Privacy aspects	***64*** bit **U**nique **ID**entifier (UID). Password (32 bit) protected EAS and ***AFI*** functionality. ***Write protection for each user memory block.***	***64*** bit **U**nique **ID**entifier (UID). Password (32 bit) protected EAS and ***AFI*** functionality. ***Write protection for each user memory block. Password Protection R/W.***	***64*** bit **U**nique **ID**entifier (UID). Password (32 bit) protected EAS and ***AFI*** functionality. ***Write protection for each user memory block. Password Protection R/W. Extensive Security*.**
EEPROM Memory Write- / read-function;	***1024*** bit, ***32*** blocks with 4 bytes each	***2048*** bit, ***64*** blocks with 4 bytes each	***2880*** bit, ***90*** blocks with 4 bytes each
User Data Memory	***896*** bit, ***28*** blocks with 4 bytes each	***1280*** bit, ***40*** blocks with 4 bytes each	***2112*** bit, ***66*** blocks with 4 bytes each
Max. write Endurance	100 000 cycles	100 000 cycles	100 000 cycles
Operating Temperature	-40° C to +85° C (reading / writing of **NeoTAG®**)	-40° C to +85° C (reading / writing of **NeoTAG®**)	-40° C to +85° C (reading / writing of **NeoTAG®**)
Data Retention	50 years at ≤ +55° C	50 years at ≤ +55° C	60 years at ≤ +55° C
Fast Data Transfer Rate	Up to ***53*** kbit / per second	Up to ***53*** kbit / per second	Up to ***53*** kbit / per second
Simultaneous Reading (Bulk Read)	Up to ***60*** NeoTAG® per second (depending on reading device and antenna)	Up to ***60*** NeoTAG® per second (depending on reading device and antenna)	Up to ***60*** NeoTAG® per second (depending on reading device and antenna)

*1) According to manufacturer data specifications NXP. For more details please check www.nxp.com
*2) According to manufacturer data specifications EM Microelectronic.
For more details please check www.emmicroelectronic.com

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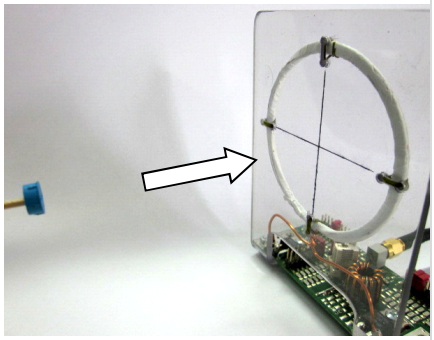
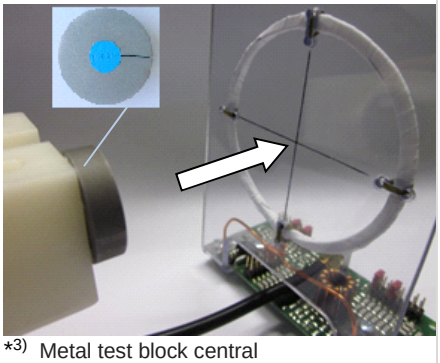
NFC-Reading	with compatible devices (e.g. smartphones)					FG/MFG10340 new FG4670
	with readers and external antennas					all NeoTAG
Typical Reading Distance	100 mm in air and non metal objects	110 mm in a metal test specimens *3)				F/MF2626 FG/MFG4335 FG4530 FG8336 Flag FG5242
	210 mm in air and non metal objects	220 mm in a metal test specimens *3)				F/MF2659 FG4670 FG/MFG10340
NeoTAG® Measuring Conditions (Example)	Positioned centrally to the reader antenna. Installation of the NeoTAG® with winding / lettering directed to reader antenna (Ø125) with an output of 2 watts.					
		 *3) Metal test block central with hole and slot.				
	Further information regarding the installation of reading antenna and reader are available upon request. The reading range depends on installation situation and environment conditions.			***Inlay***	***Plug***	***SMD***	***Flag***
Special Ambient Temperature	+180° C (to 90 hours / 14 cycles) *4)			√	√		√
	+200° C (to 5 hours / 100 cycles) *4)			√	√		√
	+220° C (to 2 hours / 167 cycles) *4)			√	√		
	+275° C (15 minutes / 1 cycle) *4)			√	√		
Qualification	Temperature shock and humidity according MIL-STD-202 standard. Ultrasonic bath for 15 minutes at 60° C in distilled water.			√	√	√	
	Drop test 100 times from 2 meters height on concrete in reference block			√	√		
	IPX8 Protection				√		√
Special Characteristic	With press fit case for quick and easy assembly.				√		
	Flexible options of incorporation and assembly: glue; shed; overmolding; customized solutions			√			
	Reflow soldering to J-STD-020D suitable For use in assembly machines					√	

*4) Temperature load above specified operating temperature +85° C is only allowed short-term and is decreasing the data retention time. The cycle data is reference value according NXP and related to the data retention time shown in NXP data sheet.
Read and write function is only allowed inside operating temperature -40° C to +85° C.
Alternative temperature duration specification on request.
Qualification, temperature duration specification for EM4237 IC on request.

Note on recommendations and representations:
The final qualification has to be performed by the customer. Indicated values are approximate values and can be affected by the installation situation and environment conditions.

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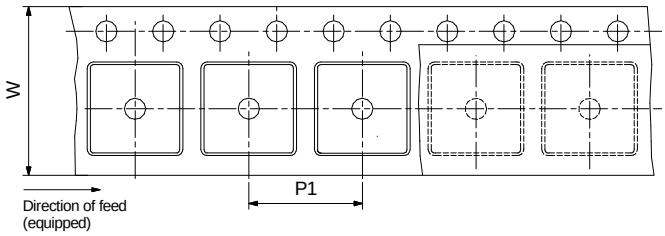
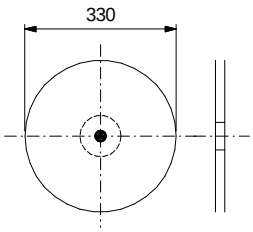
NeoTAG® Packaging (simplified view)



Reel



NeoTAG® Type	Part / Reel	W [mm]	P_1 [mm]
NeoTAG® Inlay F/MF2626	6000	8.0	4.0
NeoTAG® Inlay F/MF2659	2400	16.0	8.0
NeoTAG® Plug FG8336	1200	16.0	12.0
NeoTAG® Plug FG/MFG4335	1700	12.0	8.0
NeoTAG® Plug FG4670	2000	16.0	8.0
NeoTAG® SMD FG4530	2800	12.0	8.0

General Information:
UID numbers attached as text file up on request.
Blisterpack according to DIN EN 60286/3:2014 designed.
Storage- and transport conditions (in Blisterpack): +10°…+40° C
≤ 70% rel. humidity, dark storage and transport conditions.

Alternative packaging on request.

NeoTAG® Type	Part / Polybag	Width [mm]	Length [mm]
NeoTAG® Plug FG/MFG10340	500	70	100
NeoTAG® Flag FG5242	500	70	100

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