



TITANTAG™ DATA SHEET

#	Product	Product code	L*H*T (mm)	RFID chip	Protocol	MHz	Region	On/off metal	Read (meter)
01	Nail1/2		14*8*2.1	UCODE8	EPC C1G2	UHF		On& off	0.1
02	Nail		15*10*2.1	UCODE8	EPC C1G2	UHF		On& off	0.1
03	Inch		26*10*3.1	UCODE8	EPC C1G2	UHF		On	2.0
04	Inch TN		26*10*2.1	UCODE8	EPC C1G2	UHF		On	1.5
05	Inch MAG		26*10*3.8	UCODE8	EPC C1G2	UHF		On	1.0
06	Inch SQ		26*26*3.1	UCODE8	EPC C1G2	UHF		On	5.0
07	Smallest		38*10*3.1	UCODE8	EPC C1G2	UHF		On	3.0
08	Smallest TN		38*10*2.1	UCODE8	EPC C1G2	UHF		On	2.5
09	Smallest TK		38*10*4.1	UCODE8	EPC C1G2	UHF		On	4.5
10	Smallest MAG		38*10*4.8	UCODE8	EPC C1G2	UHF		On	4.0
11	Smallest NM		45*10*3.1	HIGGS3	EPC C1G2	UHF		Off	4.0
12	Tray U		40*13*4.1	UCODE8	EPC C1G2	UHF		On	5.5
13	Strip		60*6*3.1	HIGGS3	EPC C1G2	UHF		On	2.0
14	Pad		50*20*4.1	UCODE8	EPC C1G2	UHF		On& off	7.0
15	Dura Flex		69*10*0.4	UCODE8	EPC C1G2	UHF		Off	8.0
16	General		75*16*3.1	UCODE8	EPC C1G2	UHF		On& off	8.0
17	General TN		75*16*2.1	UCODE8	EPC C1G2	UHF		On& off	5.0
18	Basic		92*15.8*3.1	UCODE8	EPC C1G2	UHF		On	10.0
19	Basic L		110*20*3.1	UCODE8	EPC C1G2	UHF		On	12.0
20	Basic MAG		92*15.8*6.2	HIGGS3	EPC C1G2	UHF		On	5.0
21	Pallet MT		85*20*11	UCODE8	EPC C1G2	UHF		On& off	10.0
22	Pallet		94*11*1.4	HIGGS3	EPC C1G2	UHF		Off	7.0
23	Secure		95*25*3.1	UCODE8	EPC C1G2	UHF		On& off	12.0
24	Blade		139*6*4.1	UCODE8	EPC C1G2	UHF		On& off	8.0
25	Fastener		148*18*3.1	UCODE8	EPC C1G2	UHF		On& off	13.0
26	Fastener TK		148*18*4.1	UCODE8	EPC C1G2	UHF		On& off	15.0
27	Fastener MAG		148*18*12.5	UCODE8	EPC C1G2	UHF		On	15.0
28	PEEK L		100*40*7.5	HIGGS3	EPC C1G2	UHF		On	10.0
29	Inch SQ MT HF	2626MTHF	26*26*3.1	ICODE SLIX	ISO15693	HF	Global	On& off	0.05
30	Biscuit MT HF	4921MTHF	49*21*3.1	ICODE SLIX	ISO15693	HF	Global	On& off	0.2
31	2*Inch SQ MT HF	5151MTHF	51*51*3.1	ICODE SLIX	ISO15693	HF	Global	On& off	0.25
32	5527 NM HF	5527NMHF	55*27*1.4	ICODE SLIX	ISO15693	HF	Global	Off	0.20
33	5527 MT HF	5527MTHF	55*27*3.1	ICODE SLIX	ISO15693	HF	Global	On& off	0.20
34	Card MT HF	8654MTHF	86*54*3.1	ICODE SLIX	ISO15693	HF	Global	On& off	0.30
35	Board NM HF	10640NMHF	106*40*3.1	ICODE SLIX	ISO15693	HF	Global	Off	0.30
36	Board MT HF	10640MTHF	106*40*3.1	ICODE SLIX	ISO15693	HF	Global	On& off	0.30



Biscuit MT HF

Product code	4921MTHF
Frequency	13.56MHz
Dimensions (mm)	49*21*3.1
Weight (gram)	6.7
RFID Chip	<u>ICODE SLIX</u>



Memory (bits)	EEPROM	1,024	
	# of Blocks	28	
	Bytes per block	4	
	UID	64	
	CRC	16	
	Password	32	EAS& AFI
	PW identifier	8	
	IC Mfg code	8	

RFID chip bonding	Type	Wedge wire bonding	
	Materials	1 mil. aluminum wire	(made by C.C.C, USA)
	Encapsulation	Dam-filled with thermal epoxy	(made by Henkel, USA)
Antenna	Type	Double-sided copper clad antenna with gold plated	
	Process	Multi-layer laminated PCB by hot pressing process >200°C	
	Materials	PCB FR4 rigid double CCL	(made by Korean maker)

Read (up to)	On metal	15.0 cm
	Off metal	3.0 cm

Printing options	Laser engraving / etching	Yes	(including 1D/2D barcode)
	Printed label by Zebra	Yes	(including 1D/2D barcode)

Encoding options	EPC memory encoding	No
	User memory encoding	No
	EPC permanent lock	No
	USER permanent lock	No
	GS1 (All 10 schemes)	No

Attaching options	Glue	Yes
	Backing adhesive tape	Yes
	Metal screw (or rivet)	No
	Plastic screw	Yes

*% read decrease with metallic one in: 0%

*Please contact us before drilling any hole in tags!

Survival temp. °C	Lowest	Highest
	-40	150

Operating temp. °C	Lowest	Highest
	-40	85

IP Class 68

Year of release
 SLI2 Ver. 2014 (No longer available)
 SLIX Ver. 2019

Readability - Read range

Reads up to centimeters	On metal	Off metal	On high dK*	With metal bolt **
Long-range reader	15	3	3	% read decrease 0%
Mid-range reader	8	2	2	% read decrease 0%

*POM (Polyoxymethylene) = dK3.7~4.0

** With two metal bolts inserted in each tag hole

Reliability - Temperature stress

Test method	Descriptions	Pass/Fail
150°C, 6hrs	In convection oven at 150°C, 6hrs	Pass
-45<>85°C, 50 cycles	In thermal shock chamber with each temp. phase 30 min.	Pass
85°C/85%, 24hrs	In humidity chamber at 85°C/85%RH, 24hrs	Pass
Boiling water, 6 hrs	Immersed in boiling water for 6hrs	Pass

Reliability - Mechanical stress

Test method	Descriptions	Pass/Fail
Iron ball fall test	Free fall of 1kg iron ball from 1.5meters height , 50 times	Pass
Vibration test	IEC60068-2-6-64	Pass
Drop& topple test	IEC60068-2-31	Pass
Shock (acceleration) test	IEC60068-2-27	Pass
Pressure test	50 Bar (≈725psi)	Pass

Reliability - Chemical stress

Chemicals	Descriptions	Pass/Fail
Alkali	NaOH (10%, pH13) Immersed 24 hrs.	Pass
Acid	Sulfuric acid (10%, pH2) Immersed 24 hrs.	Pass
Petroleum	Gasoline, Diesel, Kerosene, lubricating oil Immersed 24 hrs.	Pass
Alcohol	Methanol, Ethanol Immersed 24 hrs.	Pass
Surfactant	Solvent for metal tool oils Immersed 24 hrs.	Pass
Salt water	IEC60068-2-11	Pass

Reliability - Ingression

IP68 - 1.5 meter deep immersion, 1hr

Value added service - Laser engraving

With CO2 laser, tag surface is precisely and permanently etched into variable data, barcode and logo with black and yellow contrast.



Reliability - Electrical stress

ESD - IEC61000-4-2 (LEVEL4 – 8KV)

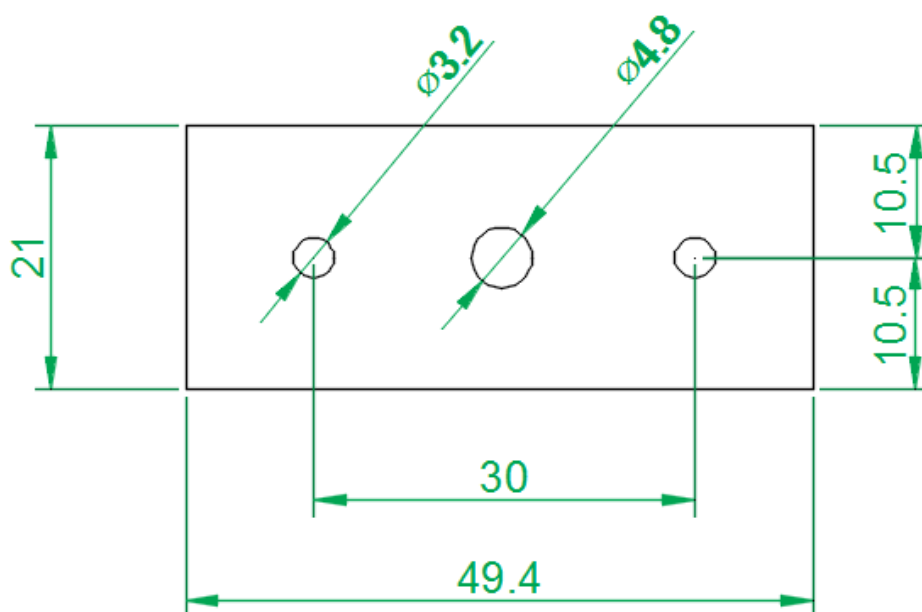
Value added service - Chip encoding

- EPC encoding up to 128bits (for UCODE8)
- User memory encoding (only for Higgs3)
- Permanent locking EPC memory
- Permanent locking User memory (only for Higgs3)
- 10 schemes of GS1 encoding, including:

GTIN (Global Trade Item Number), GLN (Global Location Number), SSCC (Serial Shipping Container Code), GRAI (Global Returnable Asset Identifier), GIAI (Global Individual Asset Identifier), CPID (Component/Part Identifier), ITIP (Identification of an individual Trade Item Piece), etc

Biscuit MT HF

4921MTHF



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