ISO 15693 ISO 14223 ISO 18000

Philips' Smart Label and Tag ICs

Product Features	Philips' Smart Label and Tag ICs ICODE 1 SL1 ICS30	ICODE 1 HC* SL1 ICS31	ICODE SLI SL2 ICS20	ICODE EPC SL2 ICS10	ICODE UID SL2 ICS11	UCODE HSL SL3 ICS30	UCODE EPC 1.19	UCODE EPC G2 SL3 ICS10
Memory								
Size [bit]	512	512	1024	136	192	2048	96 + 256	512
Write Endurance [cycles]	100 000	100 000	100 000	-	10 000	100 000	100 000	100 000
Data Retention [yrs]	10	10	10	5	5	10	10	10
Organisation	16 blocks á 4 bytes	16 blocks á 4 bytes	32 blocks á 4 bytes	17 blocks á 1 byte	24 blocks á 1 byte	64 blocks á 4 bytes	11 blocks á 4 bytes	32 blocks á 2 bytes
RF-Interface								
According to	ICODE 1	ICODE 1	ISO 15693, ISO 18000	EPC	EPC	ISO 18000	ISO 18000	EPC class 1 Gen2
Frequency	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz	13.56 MHz	UHF / 2.45 GHz	UHF / 2.45 GHz	860 - 960 MHz
Baudrate [kbit/s]	up to 26.5	up to 26.5	up to 53	up to 53	up to 53	up to 40	up to 40	up to 640
Anticollision	time slot	time slot	acc. ISO 15693	acc. EPC	acc. EPC	adapted binary tree	adapted binary tree	slotted ALOHA
Operating Distance [m]	up to 1.5	up to 1.5	up to 1.5	up to 1.5	up to 1.5	up to 7.0	up to 7.0	up to 7.0
Security								
Unique Serial Number [byte]	8	8	8	-	5	8	8	4
Write Protection	blockwise	blockwise	blockwise	OTP	-	bytewise	bytewise	blockwise
Access Keys	-	-	-	-	-	-		32-bit
Access Conditions	-	-	-	-	-	-		Plain, Password
Encryption Algorithm	-	-	-	-	-	-		-
Special Features								
EAS	yes	yes	yes	-	-	-	-	yes
AFI	yes	yes	yes	-	-	yes	yes	yes
EPC	-	-	yes	yes	yes	-	yes	yes, 96-bit
TTF Modes	-	-	-	-	-	-	-	-
Destroy Command	-	-	-	yes	yes	-	-	yes
Packaging								
Sawn Wafer	-	SL1 ICS3101W/N5D	-	-	-	-	-	-
Sawn Wafer (Au-Bumped)	SL1 ICS3001W/N4D	SL1 ICS3101W/N4D	SL2 ICS2001DW/V4D	SL2 ICS1001DW/V4	SL2 ICS1101DW/V4	SL3 ICS3001W/V4	SL3 ICS3101W/V4	SL3 ICS1001FW/V7AJ
MOA2 Module	SL1 MOA2S30/D	-	SL2 MOS2001DV	-	-	-	-	-
FCP2 Module	-	-	SL2 FCS2001DV/DH	SL2 FCS1001DV/DH	SL2 FCS1101DV/DH	-	-	SL3 FCS1001FV/DH
Stick SOT 385-1	-	-	-	-	-	-	-	-
TSSOP8	-	-	-	-	-	SL3S3001FTT	-	SL3 S1001FTT
HVSON2	-	-	-	-	-	-	-	-