ISO 7816

NXP Contact Smart Card Reader ICs

	Analog Interface				Analog & UART	Analog & UART & µC	
Product Features	**TDA8002C**	**TDA8020**	**TDA8023**	**TDA8024**	**TDA8007B**	**TDA8029**	**TDA8030/31**
Analog interfaces	1 card	2 cards	1 card	1 card	2 cards	1 card	1 card
ISO 7816 UART	-	-	-	-	yes	yes	yes
ISO 7816 dedicated timers	-	-	-	-	yes	yes	yes
µC-core	-	-	-	-	-	80C51RB+	80C51RB+
ROM/OTP [kbyte]	-	-	-	-	-	16 ROM 1	16 ROM 1 or OTP
RAM [byte]	-	-	-	-	-	768	768
Host interface	I/O lines	I²C	I²C	I/O lines	8-bit parallel	serial	USB
ESD protection on ISO pads [kV]	6	6	6	6	6	6	6
Auxiliary protected lines for C4 and C8 contacts	2	-	2	2	2x2	-	2
Vcc card power supply [V]	3 & 5	3 & 5	1.8 & 3 & 5	3 & 5	1.8 & 3 & 5	1.8 & 3 & 5	1.8 & 3 & 5
Card supply current @ 5V Vcc [mA]	55	2 x 55	55	80	2 x 55	65	55
Card supply current @ 3V Vcc [mA]	55	2 x 50	55	65	2 x 50	50	50
Card supply current @ 1.8V Vcc [mA]	-	-	30	-	30	30	30
Card clock frequency max. [MHz]	12	20	20	20	20	20	12
Card activation time max. [µs]	220	135	135	220	130	225	250
Card deactivation time max. [µs]	90	110	110	100	150	100	100
Protocol Support							
Synchronous card management	yes	-	yes	-	yes	yes	yes
Asynchronous protocol T=0 and T=1	yes	yes	yes	yes	yes	yes	yes
Security Features							
Voltage supervisor and over current detection	yes	yes	yes	yes	yes	yes	yes
Current protection on VCC, I/O, RST, CLK	-	yes	yes	yes	yes	yes	yes
Additional Product Information							
Power supply [V]	3 … 6.5	2.5 … 6.5	2.7 … 6.5	2.7 … 6.5	2.7 … 6	2.7 … 6	4.2 … 5.5
Power down mode current max. [µA]	70	150	2	-	350	20 (shut down)	500 (suspend)
Temperature range [°C]	-25 … +85	-25 … +85	-40 … +85	-25 … +85	-40 … +85	-25 … +85	-25 … +85
Package	SO28 / LQFP32	LQFP32	TSSOP28	SO28 / TSSOP28	LQFP48	LQFP32	LQFP64
Software Support (EMV)	-	-	-	-	yes	yes	yes
EMV compliance	EMV3.1.1 / EMV4.0	EMV3.1.1 / EMV4.0	EMV3.1.1 / EMV4.0	EMV3.1.1 / EMV4.0	EMV3.1.1 / EMV4.0	EMV3.1.1 / EMV4.0	EMV3.1.1