S. No	Current State	Condition	Next State	Outputs
1	TX_TEST_XMIT	power_on || mr_main_reset || (xmitCHANGE && tx_oset_indicate && !tx_even)	TX_TEST_XMIT	
		xmit == CONFIGURATION	CONFIGURATION	transmitting <= false COL <= false
		xmit == IDLE || (xmit == DATA && (TX_EN || TX_ER))	IDLE	
		xmit == DATA && !TX_EN && !TX_ER	XMIT_DATA	
2	CONFIGURATION			tx_o_set <= /C/
3	IDLE	xmit == DATA && tx_oset_indicate && !TX_EN && !TX_ER	XMIT_DATA	tx_o_set <= /I/
4	XMIT_DATA	TX_EN && !TX_ER && tx_oset_indicate	START_OF_PACKET	tx_o_set <= /I/
		TX_EN && TX_ER	ALIGN_ERR_START	
		!assert_lpidle && !TX_EN && tx_oset_indicate	XMIT_DATA	
		assert_lpidle && tx_oset_indicate	XMIT_LPIDLE	
5	ALIGN_ERR_START	tx_oset_indicate	START_ERROR	
6	START_ERROR	tx_oset_indicate	TX_DATA_ERROR	transmitting <= true COL <= receiving tx_o_set <= /S/
7	TX_DATA_ERROR	tx_oset_indicate	TX_PACKET	COL <= receiving tx_o_set <= /V/
8	START_OF_PACKET	tx_oset_indicate	TX_PACKET	transmitting <= true COL <= receiving tx_o_set <= /S/
9	TX_PACKET	TX_EN	TX_DATA	
		!TX_EN && !TX_ER	END_OF_PACKET_NOEXT	
		!TX_EN && TX_ER	END_OF_PACKET_EXT	
10	TX_DATA	tx_oset_indicate	TX_PACKET	COL <= receiving tx_o_set <= VOID(/D/)

11	END_OF_PACKET_NOEXT	tx_oset_indicate	EPD2_NOEXT	COL <= FALSE tx_o_set <= /T/ IF (tx_even == FALSE) THEN transmitting <= FALSE
12	EPD2_NOEXT	!tx_even && tx_oset_indicate	XMIT_DATA	transmitting <= false tx_o_set <= /R/
		tx_even && tx_oset_indicate	EPD3	
13	EPD3	tx_oset_indicate	XMIT_DATA	tx_o_set <= /R/
14	END_OF_PACKET_EXT	!TX_ER && tx_oset_indicate	EXTEND_BY_1	COL <= receiving tx_o_set <= VOID(/T/)
		TX_ER && tx_oset_indicate	CARRIER_EXTEND	
15	EXTEND_BY_1	tx_oset_indicate	EPD2_NOEXT	COL <= FALSE tx_o_set <= /R/ IF (tx_even == FALSE) THEN transmitting <= FALSE
16	CARRIER_EXTEND	!TX_EN && !TX_ER && tx_oset_indicate	EXTEND_BY_1	COL <= receiving tx_o_set <= VOID(/R/)
		TX_EN && EX_ER && tx_oset_indicate	START_ERROR	
		TX_EN && !TX_ER && tx_oset_indicate	START_OF_PACKET	
		!TX_EN && TX_ER && tx_oset_indicate	CARRIER_EXTEND	
17	XMIT_LPIDLE	!assert_lpidle && tx_oset_indicate	XMIT_DATA	tx_o_set <= /LI/
		assert_lpidle && tx_oset_indicate	XMIT_LPIDLE	