

DESCRIPTION:

RT6588 IS A REMOTE CONTROL ENCODER AND DECODER PAIRED WITH RT6688 UTILIZING CMOS TECHNOLOGY. RT6588 HAS 12 BITS OF TRI-STATE ADDRESS PINS PROVIDING A MAXIMUM OF 531,441 ADDRESS CODES

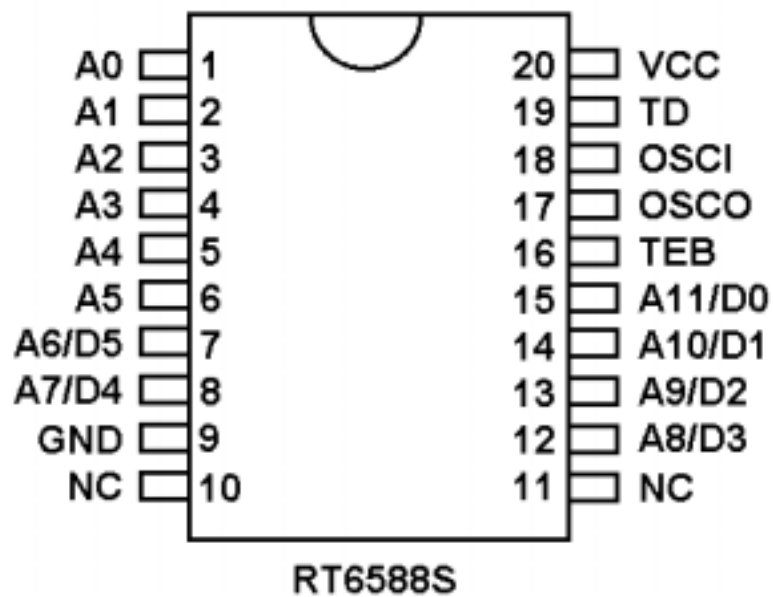
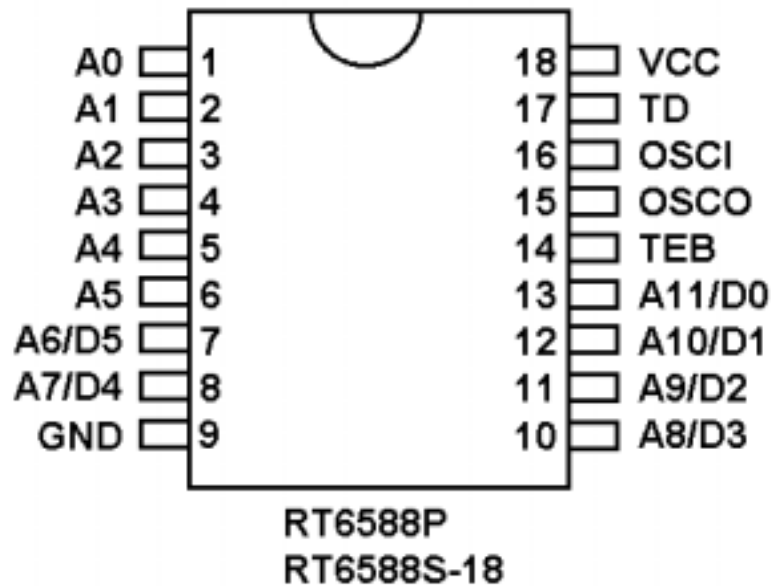
FEATURES :

1. CMOS TECHNOLOGY.
2. LOW STANDBY CURRENT $<1\ \mu\text{A}$.
3. OPERATING VOLTAGE 3-15V.
4. UP TO 12 TRI-STATE CODE ADDRESS PINS.
5. UP TO 6 DATA ADDRESS PINS.
6. BUILD IN OSCILLATOR.

APPLICATIONS :

1. CAR AND MOTORCYCLE SECURITY SYSTEMS.
2. WIRELESS DOOR BELL.
3. HOME AUTOMATION SYSTEM.

PIN ASSIGNMENT :



PIN DESCRIPTION :

PIN NO.		PIN Name	DESCRIPTION	I/O
18PIN	20PIN			
1~6	1~6	A0~A5	CODE ADDRESS INPUT PIN, EACH PIN CAN SET TO 3 STATE "0", "1" OR "F"(floating).	I
7~8 10~13	7~8 12~15	A6/D5~A7/D4 A8/D3~A11/D0	CAN BE SET TO CODE ADDRESS INPUT PIN OR DATA INPUT PIN. WHEN CODE ADDRESS SET TO BE INPUT PIN, EACH PIN CAN SET TO 3 STATE "0", "1" OR "F" (floating). WHEN DATA INPUT IS SET, EACH CAN BE SET TO "0" OR "1" STATE.	I
14	16	TEB	TRANSMISSION ENABLE. WHEN THE SIGNAL FROM HIGH VOLTAGE TO LOW VOLTAGE, TD WILL TRANSMIT SERIAL OF DATA OUTPUT.	I
15	17	OSCO	OSCILLATOR OUTPUT PIN.	O
16	18	OSCI	OSCILLATOR INPUT PIN.	I
17	19	TD	SERIAL DATA OUTPUT PIN.	O
18	20	VCC	POSITIVE POWER SUPPLY.	
9	9	GND	NEGATIVE POWER SUPPLY.	

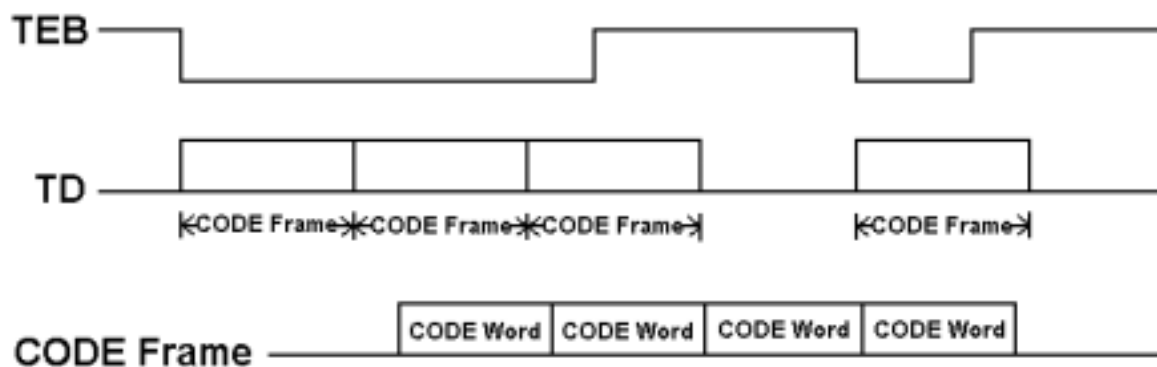
FUNCTIONAL DESCRIPTION :

WHEN TEB IS SET TO "0" (LOW VOLTAGE STAGE), RT6588 WILL TRANSMIT SERIAL OF DATA WAVEFORM THROUGH A0~A5, A6/D5~A11/D0, WAVEFORM TRANSMITTED THROUGH RADIO FREQUENCY (RF) MODULATION AND RECEIVED BY RF DEMODULATION AND RESHAPED TO SPECIAL WAVEFORM, RT6688 IS THEN DECODE THE SPECIAL WAVEFORM AND SET THE CORRESPONDING OUTPUT PINS. THUS COMPLETE A REMOTE CONTROL ENCODING AND DECODING FUNCTION. THIS CAN BE USE IN MOST OF THE REMOTE CONTROL APPLICATION.

DATA TRANSMISSION FORMAT

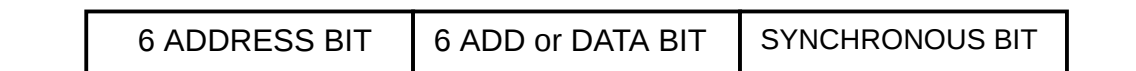
CODE Frame

A COMPLETE CODE FRAME CONSIST OF 4 SERIAL DATA OF CODE WORDS. WHEN TEB IS SET TO "0" (LOW VOLTAGE STAGE),TD WILL TRANSMIT SERIAL OF DATA OUTPUT. FORMAT IS AS FOLLOW :



CODE Word

CODE WORD CONSIST OF FULL SET OF SERIAL DATA FORMAT, THE COMBINATION IS AS FOLLOW :



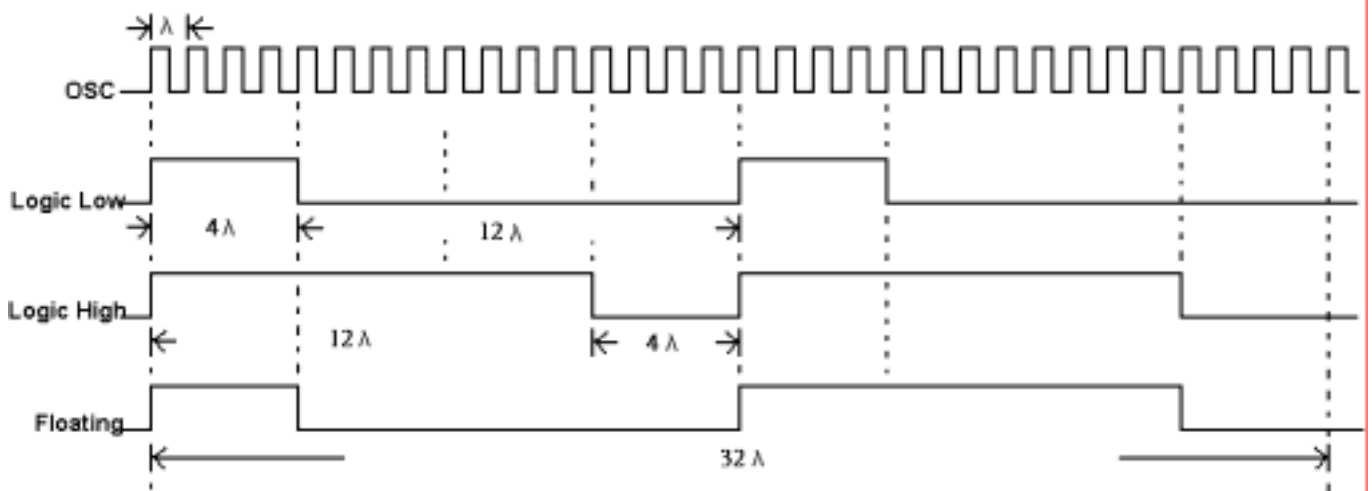
EACH CODE WORD CONSIST OF 12 ADDRESS BITS OR 6 ADDRESS BIT AND 6 DATA BITS, THE TRANSMISSION SEQUENCE IS AS THE DIAGRAM SHOWN :

A0	A1	A2	A3	A4	A5	A6/ D5	A7/ D4	A8/ D3	A9/ D2	A10/ D1	A11/ D0	Sync
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6 Data	A0	A1	A2	A3	A4	A5	D5	D4	D3	D2	D1	D0	Sync
5 Data	A0	A1	A2	A3	A4	A5	A6	D4	D3	D2	D1	D0	Sync
4 Data	A0	A1	A2	A3	A4	A5	A6	A7	D3	D2	D1	D0	Sync
3 Data	A0	A1	A2	A3	A4	A5	A6	A7	A8	D2	D1	D0	Sync
2 Data	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	D1	D0	Sync
1 Data	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	D0	Sync
No Data	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	Sync

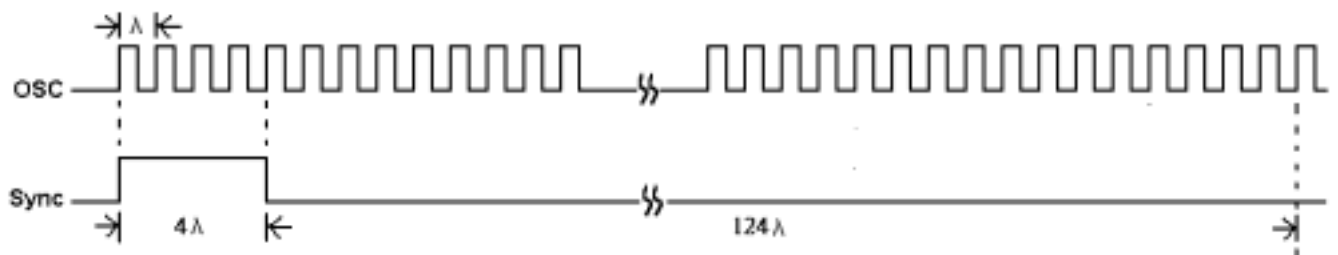
CODE BIT

CODE BIT IS THE COMBINATION OF ADDRESS AND DATA BITS. RT6588 TRANSMIT A SERIAL OF WAVE FORM IS CONSIST OF CODE BITS AND SYNC, CODE BIT CAN BE DEFINE INTO 3 STATE: Logic Low("0"), Logic High("1"), Floating state, EACH LENGTH OF CODE BIT IS EQUAL TO 32 OSCILLATION PULSE, PLEASE REFER TO THE DIAGRAM SHOWN BELOW :



SYNC BIT

EACH SYNC BIT LENGTH IS EQUAL TO 128 OSCILLATION PULSE.



Absolute Maximum Ratings

Symbol	Parameter	Condition	Rating	Unit
V_{CC}	Supply voltage		-0.3~16	V
V_I	Input voltage		-0.3~ $V_{CC}+0.3$	V
V_O	Output voltage		-0.3~ $V_{CC}+0.3$	V
P_{dis}	Max. power dissipation	$V_{CC}=12V$	300	mW
T_{OP}	Operating Temperature		-20 ~ 70	
T_{St}	Storage Temperature		-40 ~ 125	

DC Electrical Characteristics

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{CC}	Supply Voltage		3		15	V
I_{sb}	Stand By Current	$V_{CC}=12V$			1	μA
I_{OH}	Output Driving Current	$V_{CC}=12V$ $V_{OH}=6V$	10			mA
I_{OL}	Output Sinking Current	$V_{CC}=12V$ $V_{OL}=6V$	9			mA