

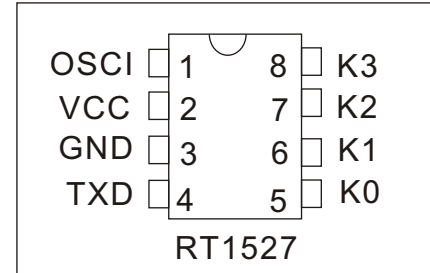
Description

RT1527 is an OTP Encoder utilizing CMOS technology process. RT1527 has a maximum of 20 bits providing up to 1 million codes. It can reduce any code collision and unauthorized code scanning possibilities.

Features

CMOS Technology
 Low stand by Current: 1.0 μ A
 Wide range of Operating Voltage: $V_{cc} = 3.0V \sim 12V$
 Up to 4 data pins
 Total 1048576 address codes
 Single Resistor Oscillator

Pin Out



Pin Description

Symbol	Description	Pin	I / O
OSCI	Oscillator Input pull-up R to Vcc	1	I
Vcc	Positive Power Supply	2	
GND	Ground	3	
TXD	Data Output Pin	4	O
K0	Data Input with pull-low R	5	I
K1	Data Input with pull-low R	6	I
K2	Data Input with pull-low R	7	I
K3	Data Input with pull-low R	8	I

Electrical Characteristics

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Operating Voltage		V_{cc}	3	5	12	V
Stand by Current	$V_{cc} = 12V$, OSC stop K1 ~ K3 = Low Output Unloaded	I_{sb}		1.0	3.0	μ A
Operating Current	$V_{cc} = 12V$	I_{op}		0.5	1.0	mA
Source Current	$V_{cc} = 12V$, $V_{oh} = 6V$	I_{oh}	3			mA
Sink Current	$V_{cc} = 12V$, $V_{ol} = 6V$	I_{ol}	3			mA
Operating Freq		F_{op}		80K		Hz

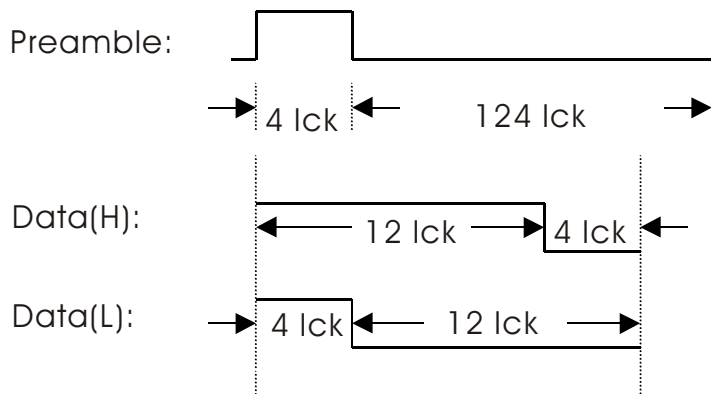
Absolute Maximum Ratings

Symbol	Parameter	Conditions	Rating	Unit
V_{cc}	Supply Voltage		-0.3 ~ 13	V
V_i	Input Voltage		-0.3 ~ $V_{cc} + 0.3$	V
V_o	Output Voltage		-0.3 ~ $V_{cc} + 0.3$	V
T_{st}	Storage Temp		-40 ~ 125	
T_{op}	Operating Temp		-20 ~ 70	
P_{dis}	Max. Power Dissp	$V_{cc} = 12V$	300	mW

Output Format :

Output Data Frame :

Preamble	C0~C19(1 Million Codes)	D0	D1	D2	D3
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Define : 1 lck=8 OSC clock

K0~K3 Combination Table:

K3	K2	K1	K0	D3	D2	D1	D0
0	0	0	1	0	0	0	1
0	0	1	0	0	0	1	0
0	0	1	1	0	0	1	1
0	1	0	0	0	1	0	0
0	1	0	1	0	1	0	1
0	1	1	0	0	1	1	0
0	1	1	1	0	1	1	1
1	0	0	0	1	0	0	0
1	0	0	1	1	0	0	1
1	0	1	0	1	0	1	0
1	0	1	1	1	0	1	1
1	1	0	0	1	1	0	0
1	1	0	1	1	1	0	1
1	1	1	0	1	1	1	0
1	1	1	1	1	1	1	1