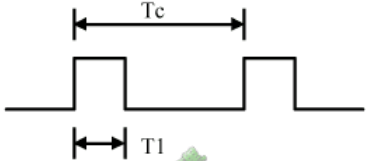


**1) uPD6121G with simple repeat code**

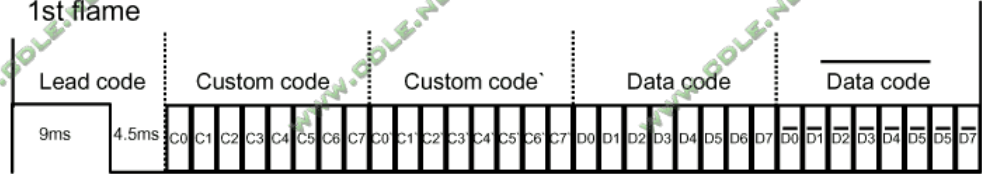
A single pulse, modulated with 37.91KHz signal at 455KHz



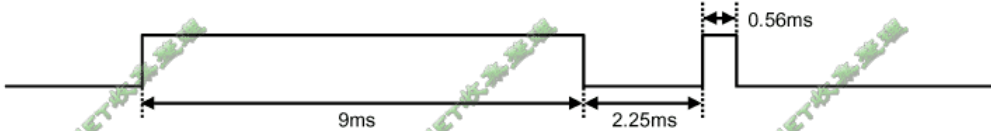
Carrier frequency  
 $f_{CAR} = 1/T_c = f_{OSC}/12$   
 Duty ratio =  $T_1/T_c = 1/3$

**- Configuration of Flame**

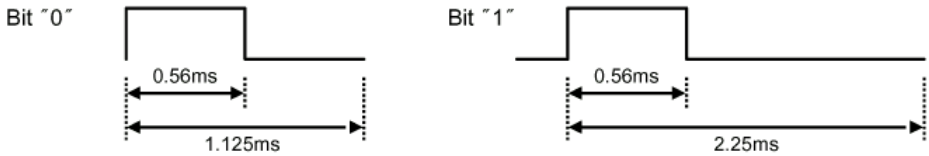
1st flame



**- Repeat code**

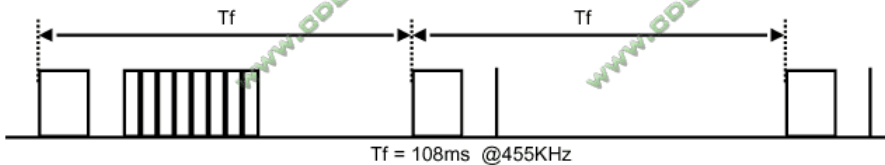


**Bit Description**



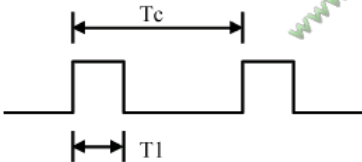
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



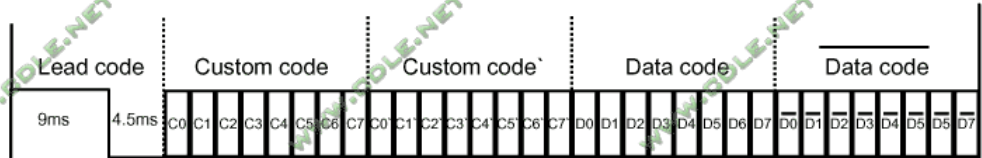
**2) uPD6121G with full repeat code**

A single pulse, modulated with 37.91KHz signal at 455KHz

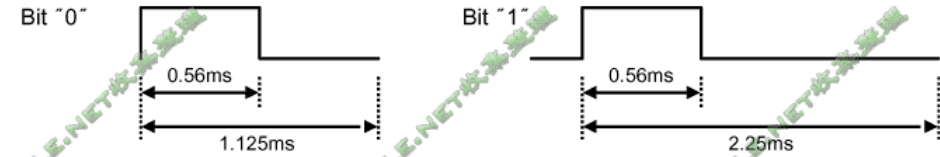


Carrier frequency  
 $f_{CAR} = 1/T_c = f_{OSC}/12$   
 Duty ratio =  $T_1/T_c = 1/3$

**- Configuration of Flame**  
 1st flame

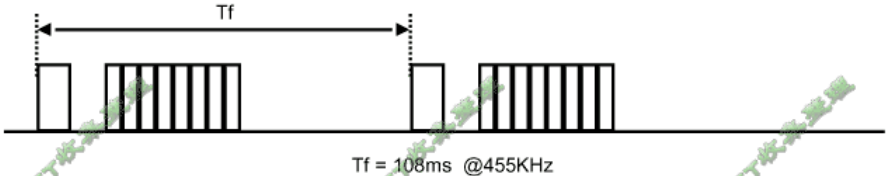


**- Bit Description**



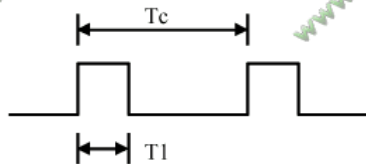
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



### 3) TC9012F/9243

A single pulse, modulated with 37.91KHz signal at 455KHz



Carrier frequency

$$f_{CAR} = 1/T_c = f_{OSC}/12$$

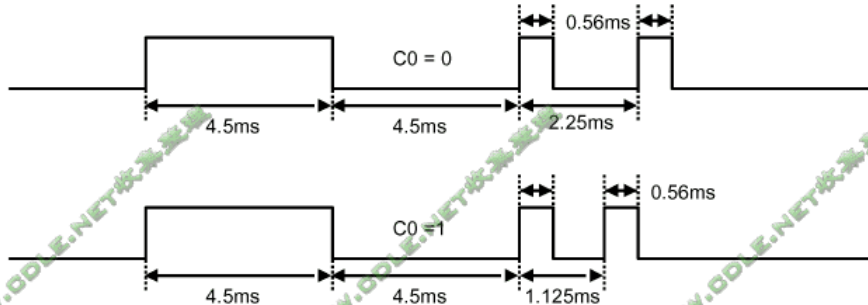
$$\text{Duty ratio} = T_1/T_c = 1/3$$

#### - Configuration of Flame

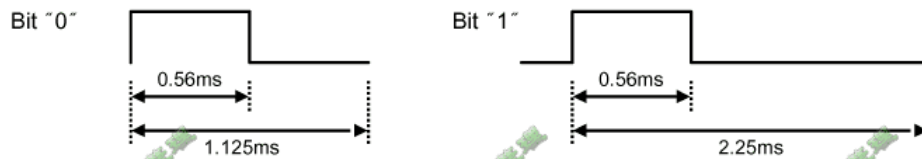
1st flame



#### - Repeat code

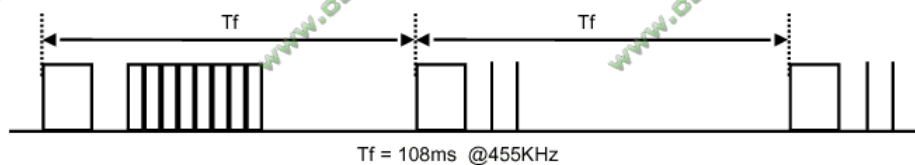


#### - Bit Description



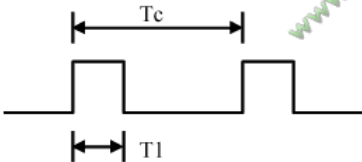
#### - Flame Interval : Tf

The transmitted waveform as long as a key is depressed



**4) M50560-001P**

A single pulse, modulated with 37.91KHz signal at 455KHz



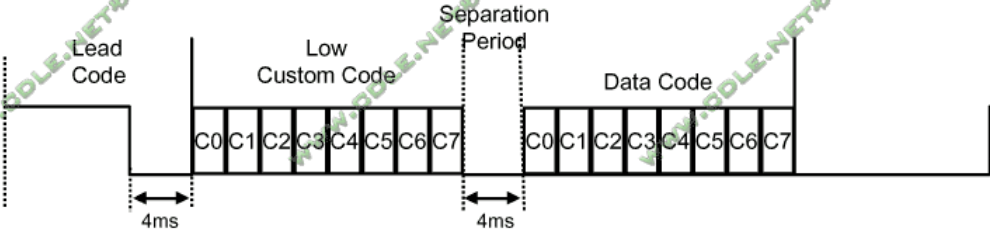
Carrier frequency

$$f_{CAR} = 1/T_c = f_{OSC}/12$$

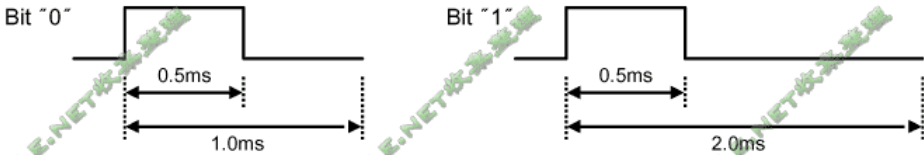
$$\text{Duty ratio} = T_1/T_c = 1/3$$

**- Configuration of Flame**

1st flame



**- Bit Description**



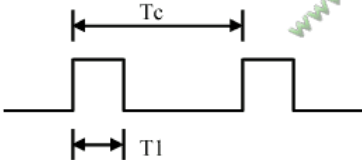
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**5) LC7461M-C13 with simple repeat code**

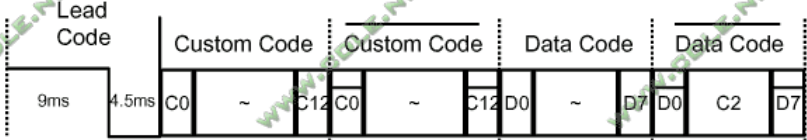
A single pulse, modulated with 37.91KHz signal at 455KHz



Carrier frequency  
 $f_{CAR} = 1/T_c = f_{OSC}/12$   
 Duty ratio =  $T_1/T_c = 1/3$

**- Configuration of Flame**

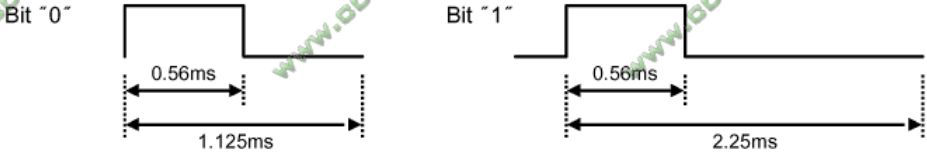
1st flame



**- Repeat code**

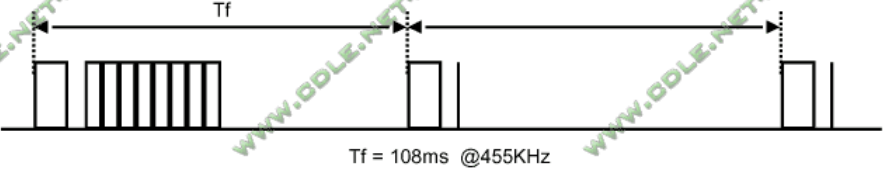


**- Bit Description**



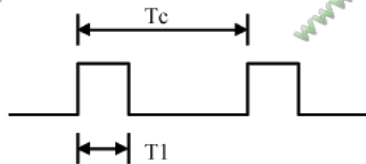
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**6) LC7461M-C13 with full repeat code**

A single pulse, modulated with 37.91KHz signal at 455KHz



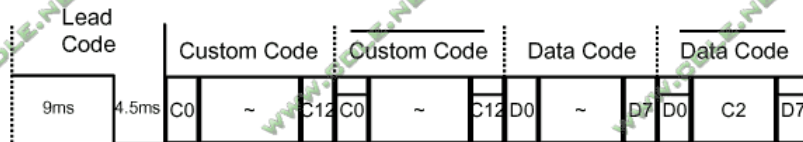
Carrier frequency

$$f_{CAR} = 1/T_c = f_{OSC}/12$$

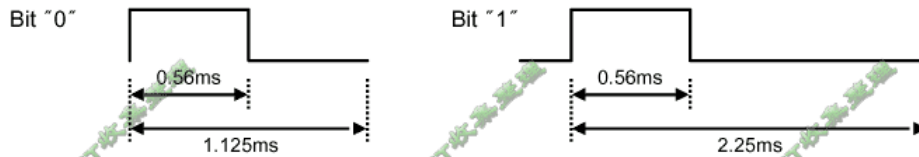
$$\text{Duty ratio} = T_1/T_c = 1/3$$

**- Configuration of Flame**

1st flame

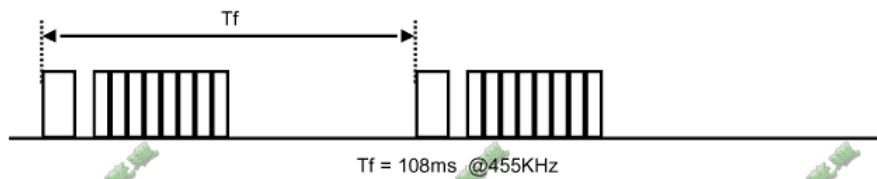


**- Bit Description**



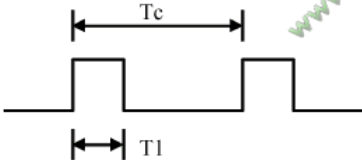
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**7) M3004 LAB1-Carrier**

A single pulse, modulated with 37.91KHz signal at 455KHz



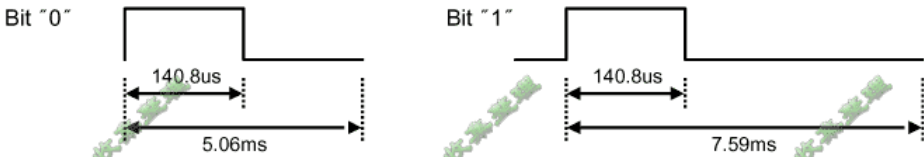
Carrier frequency  
 $f_{CAR} = 1/T_c = f_{OSC}/12$   
 Duty ratio =  $T_1/T_c = 1/3$

**- Configuration of Flame**

1st flame

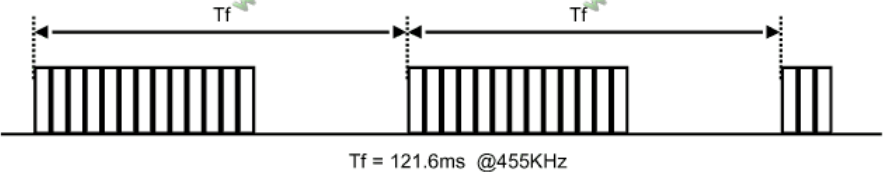


**- Bit Description**



**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed

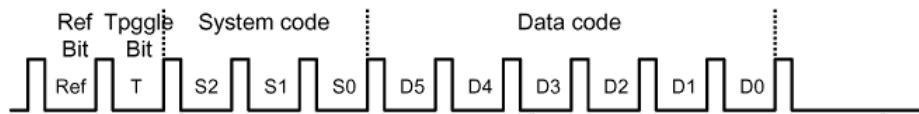


**8) M3004 LAB1 - Flash**

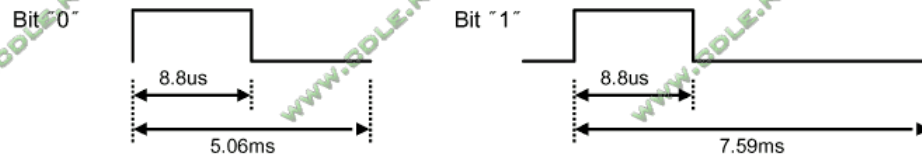
A single pulse at 455KHz

**- Configuration of Flame**

1st flame

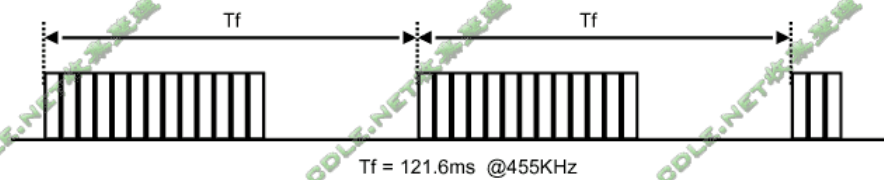


**- Bit Description**



**- Flame Interval : Tf**

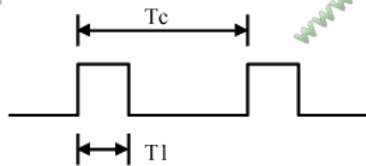
The transmitted waveform as long as a key is depressed





**9) SAA3010(RC-5)**

A single pulse, modulated with 37.917KHz signal at 455KHz



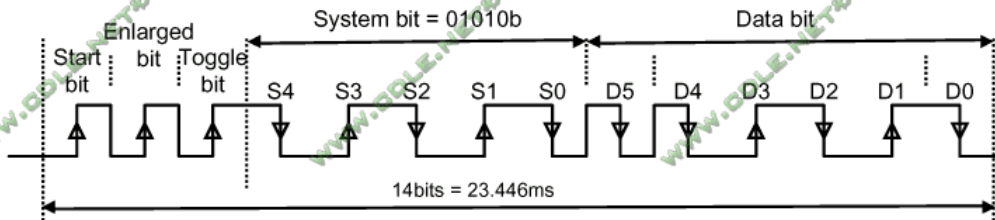
Carrier frequency

$$f_{CAR} = 1/T_c = f_{OSC}/12$$

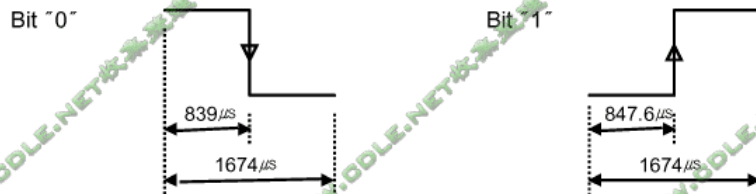
$$\text{Duty ratio} = T_1/T_c = 1/3$$

**- Configuration of Flame**

1st flame

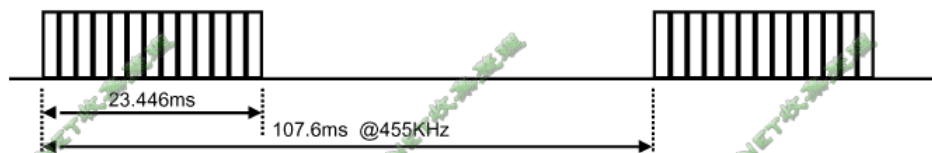


**- Bit Description**



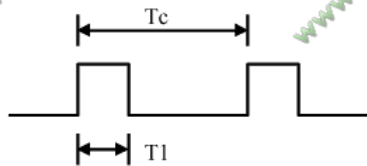
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**10) uPD1986C**

A single pulse, modulated with 37.917KHz signal at 455KHz



Carrier frequency

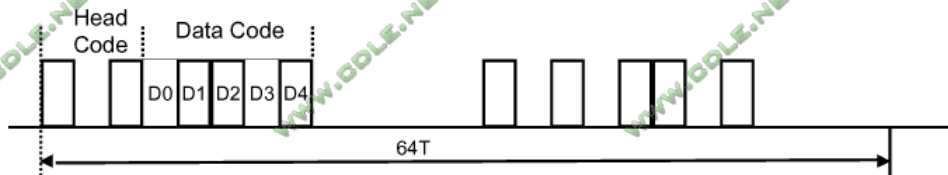
$$f_{CAR} = 1/T_c = f_{OSC}/12$$

$$\text{Duty ratio} = T_1/T_c = 1/3$$

$$\text{Time Unit} = T = 43T_c$$

**- Configuration of Flame**

1st flame



**- Bit Description**

Bit "0"

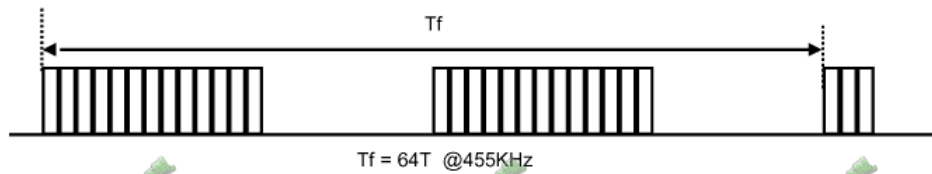


Bit "1"



**Flame Interval :  $T_f$**

The transmitted waveform as long as a key is depressed

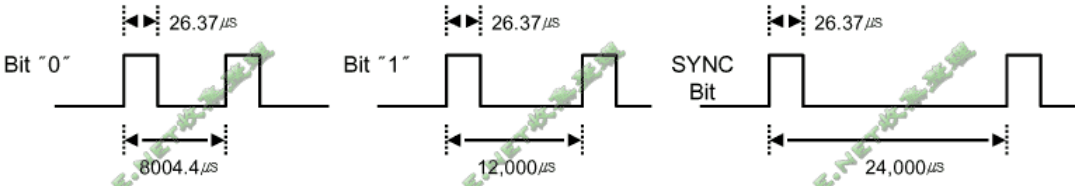


**11) MV500 (4ms)**

A single pulse at 455KHz

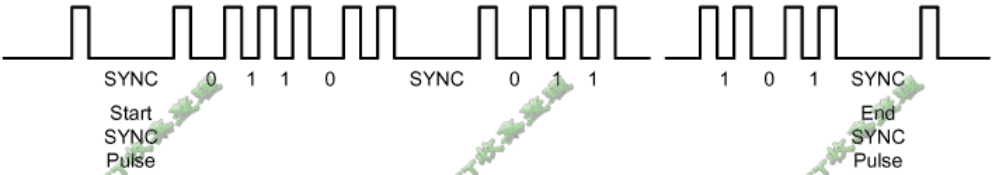


**- Bit Description**



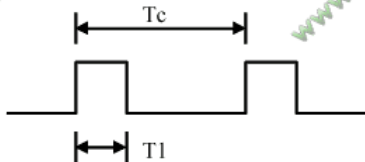
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



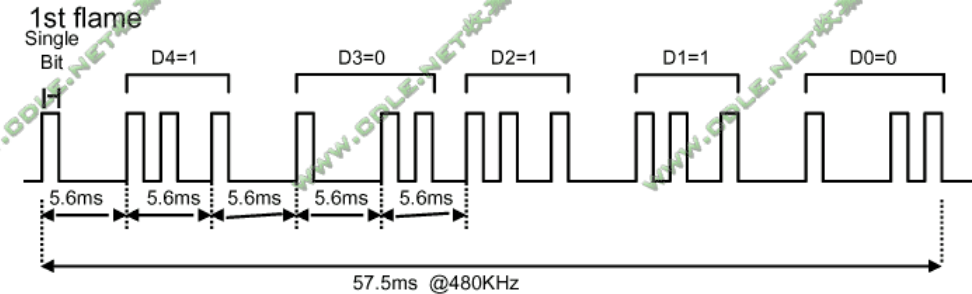
**12) Zenith CG1**

A single pulse, modulated with 40KHz signal at 480KHz



Carrier frequency  
 $f_{CAR} = 1/Tc = f_{OSC}/12$   
 Duty ratio =  $T1/Tc = 1/3$

**- Configuration of Flame**

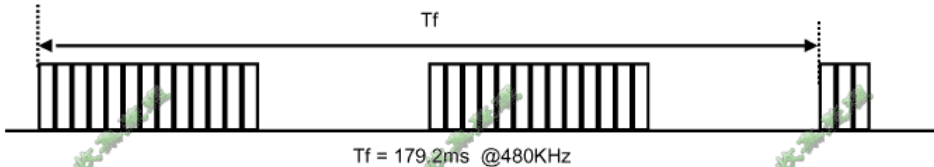


**- Bit Description**



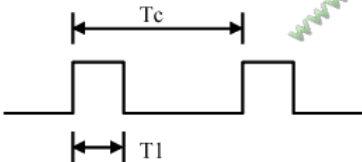
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**13) Zenith CG2**

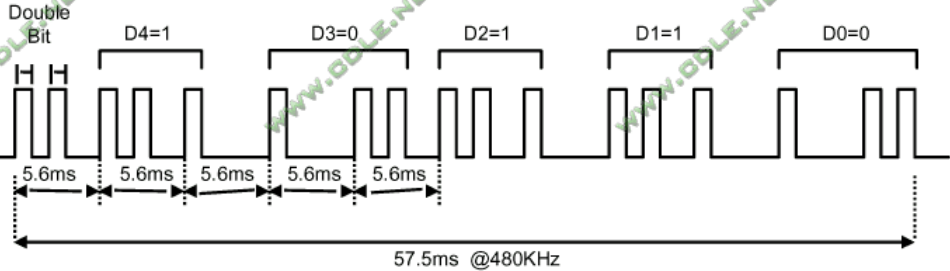
A single pulse, modulated with 40KHz signal at 480KHz



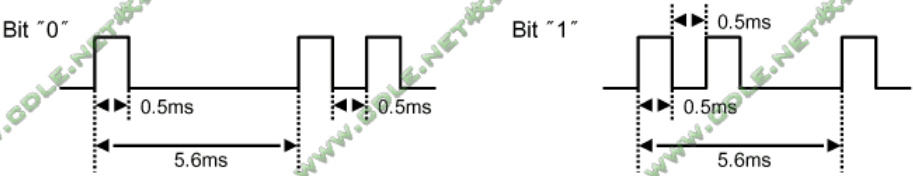
Carrier frequency  
 $f_{CAR} = 1/Tc = f_{OSC}/12$   
 Duty ratio =  $T1/Tc = 1/3$

**- Configuration of Flame**

1st flame

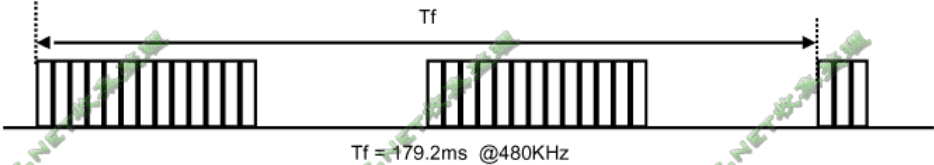


**- Bit Description**



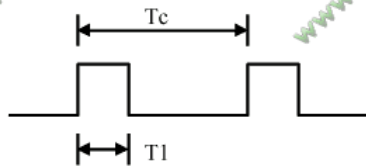
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**14) LR3715M**

A single pulse, modulated with 37.917KHz signal at 455KHz



Carrier frequency

$$f_{CAR} = 1/Tc = f_{OSC}/12$$

$$\text{Duty ratio} = T1/Tc = 1/3$$

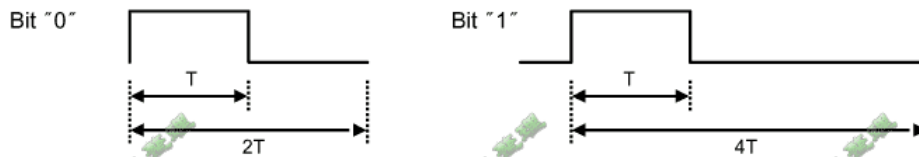
$$\text{Time Unit} = T = 10Tc$$

**- Configuration of Flame**

1st flame

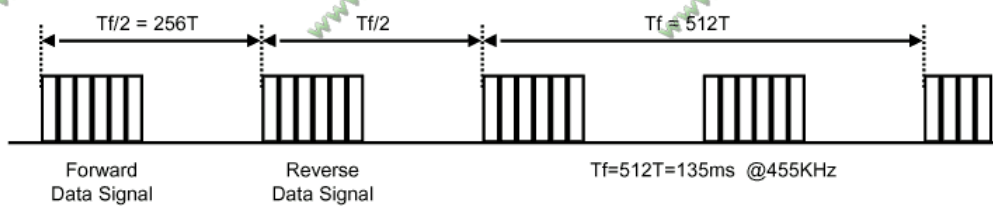


**- Bit Description**



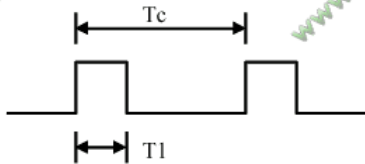
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**15) SONY - D7C6**

A single pulse, modulated with 40KHz signal at 480KHz



Carrier frequency  
 $f_{CAR} = 1/T_c = f_{OSC}/12$   
 Duty ratio =  $T_1/T_c = 1/3$   
 Time Unit =  $T = 24T_c = T$

**- Configuration of Flame**

1st flame

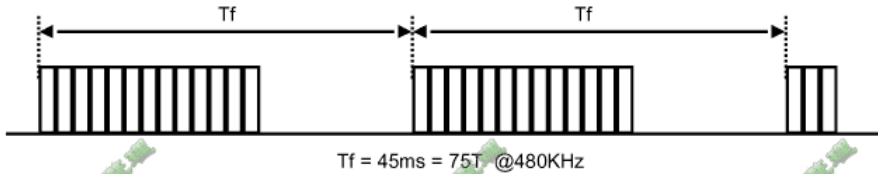


**- Bit Description**



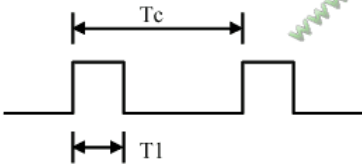
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**16) SONY - D7C8**

A single pulse, modulated with 40KHz signal at 480KHz



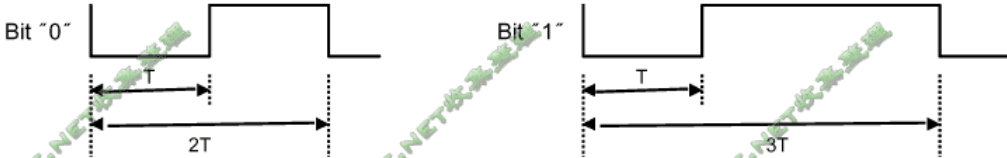
Carrier frequency  
 $f_{CAR} = 1/T_c = f_{OSC}/12$   
 Duty ratio =  $T_1/T_c = 1/3$   
 Time Unit =  $T = 24T_c$

**- Configuration of Flame**

1st flame

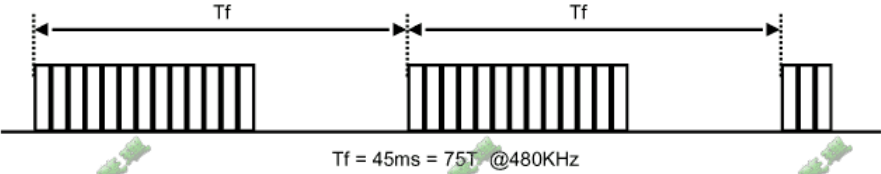


**- Bit Description**



**- Flame Interval : Tf**

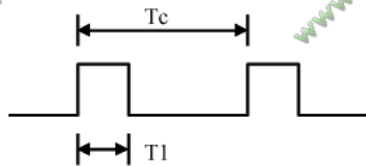
The transmitted waveform as long as a key is depressed





**17) MN6014-C5D6**

A single pulse, modulated with 56.875KHz signal at 455KHz



Carrier frequency

$$f_{CAR} = 1/T_c = f_{OSC}/12$$

$$\text{Duty ratio} = T_1/T_c = 1/3$$

$$\text{Time Unit} = 32T_c = T$$

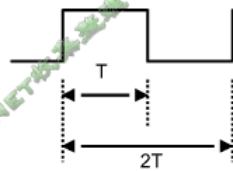
**- Configuration of Flame**

1st flame

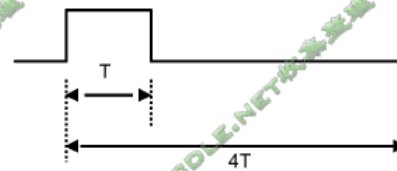


**- Bit Description**

Bit "0"

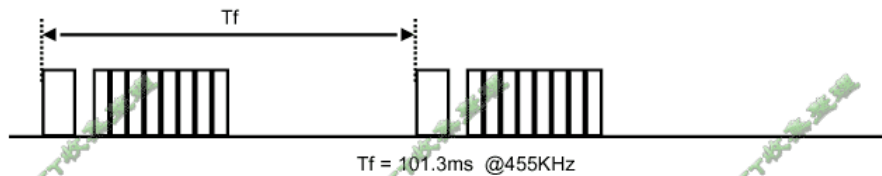


Bit "1"



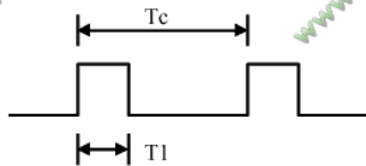
**- Flame Interval : Tf**

The transmitted waveform as long as a key is depressed



**18) MN6014-C6D6**

A single pulse, modulated with 36.6KHz signal at 440KHz



Carrier frequency

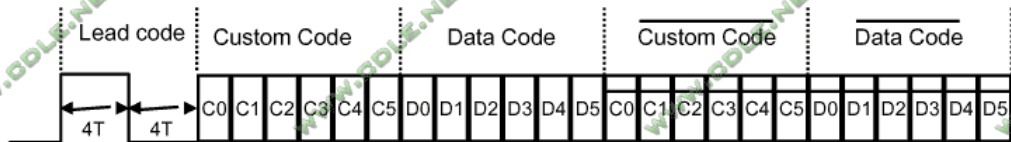
$$f_{CAR} = 1/T_c = f_{OSC}/12$$

$$\text{Duty ratio} = T_1/T_c = 1/3$$

$$\text{Time Unit} = 32T_c$$

**- Configuration of Flame**

1st flame

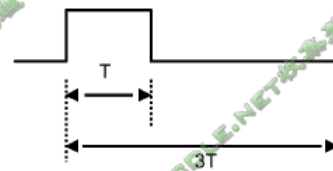


**- Bit Description**

Bit "0"

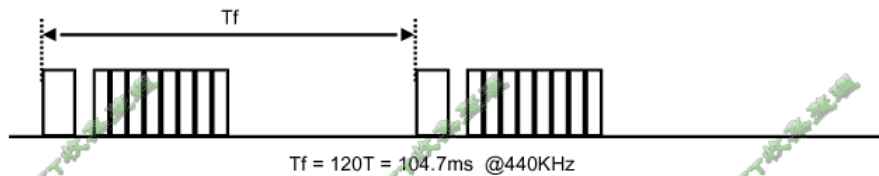


Bit "1"



**- Flame Interval : Tf**

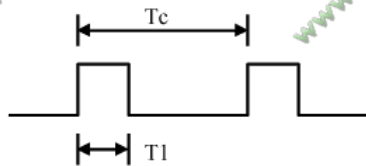
The transmitted waveform as long as a key is depressed



$$T_f = 120T = 104.7\text{ms} @ 440\text{KHz}$$

**19) AEHA**

A single pulse, modulated with 37.917KHz signal at 455KHz



Carrier frequency

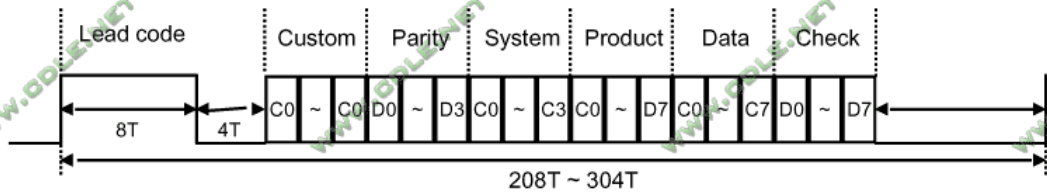
$$f_{CAR} = 1/T_c = f_{OSC}/12$$

$$\text{Duty ratio} = T_1/T_c = 1/3$$

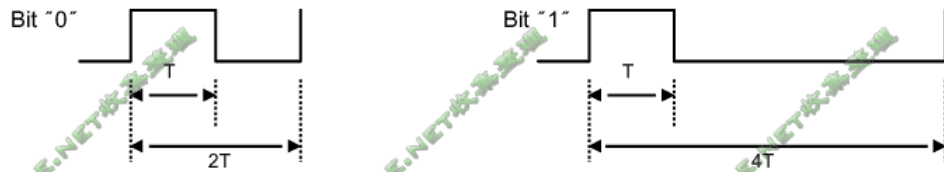
$$\text{Time Unit} = 16T_c = T$$

**- Configuration of Flame**

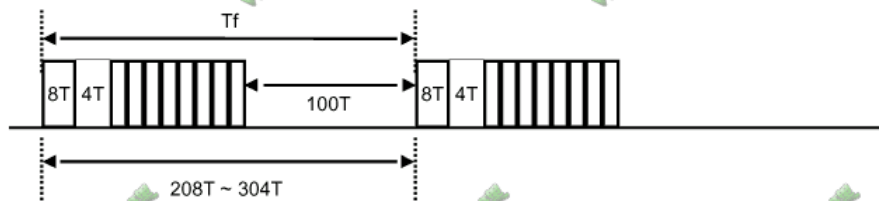
1st flame



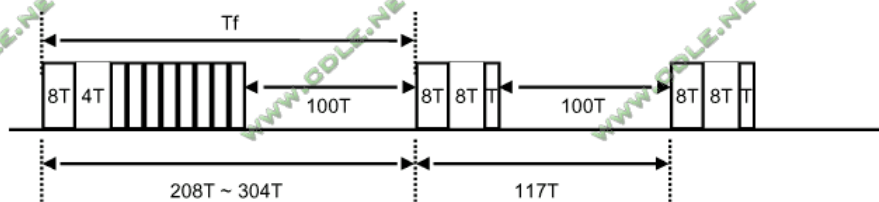
**- Bit Description**



**- Normal Repeat**



**- Abbreviated Repeat**

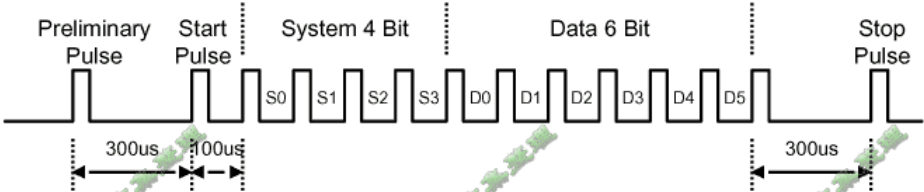


20) IRT1250

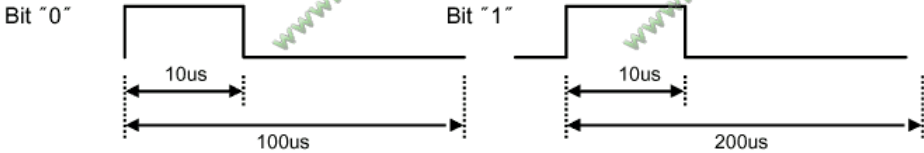
A single pulse at 600KHz

- Configuration of Flame

1st flame

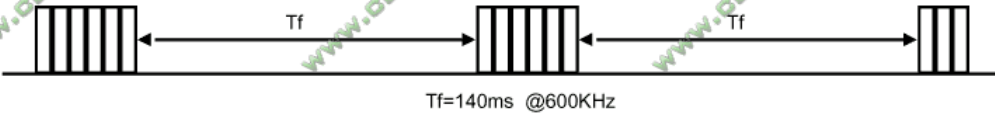


- Bit Description



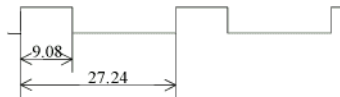
- Flame Interval : Tf

The transmitted waveform as long as a key is depressed

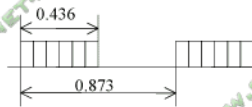


[MAT NEW] (MATSUSHITA FORMAT)

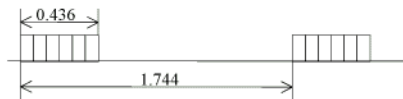
CARRIER (μsec)



BIT '0' (msec)



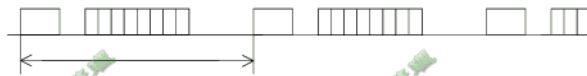
BIT '1' (msec)



SINGLE-WORD FORMAT (msec)

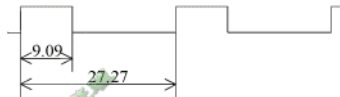


REPEAT FORMAT (msec)

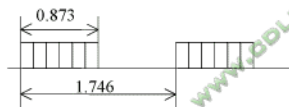


[MN6030] (MATSUSHITA FORMAT)

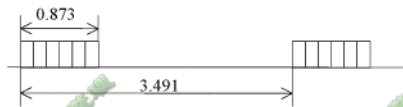
CARRIER (usec)



BIT '0' (msec)



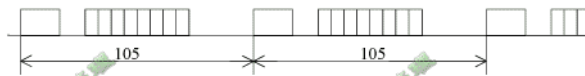
BIT '1' (msec)



SINGLE-WORD FORMAT (msec)

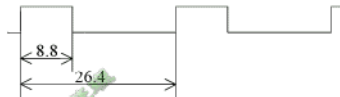


REPEAT FORMAT (msec)

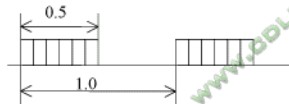


[M50560] (MITSUBISHI FORMAT)

CARRIER (usec)



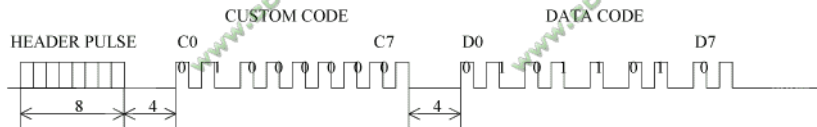
BIT '0' (msec)



BIT '1' (msec)



SINGLE-WORD FORMAT (msec)

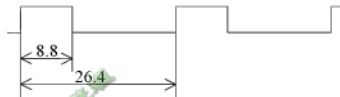


REPEAT FORMAT (msec)

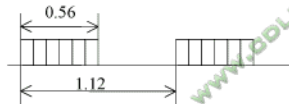


[D6121],[BU5777],[D1913]

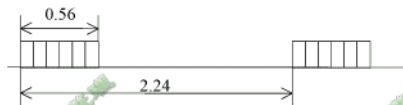
CARRIER (usec)



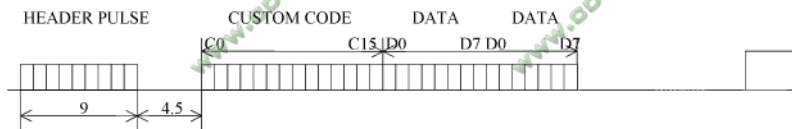
BIT '0' (msec)



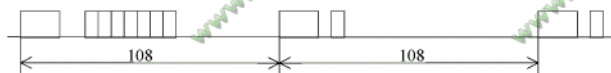
BIT '1' (msec)



SINGLE-WORD FORMAT (msec)



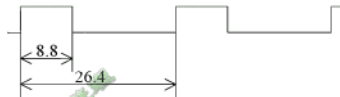
REPEAT FORMAT (msec)



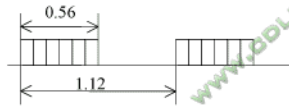


[TC9012]

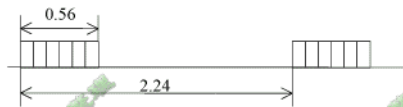
CARRIER (usec)



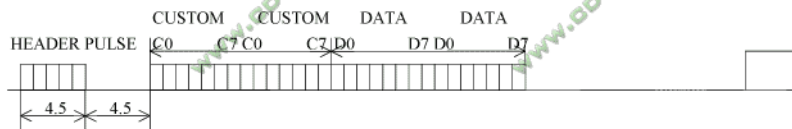
BIT '0' (msec)



BIT '1' (msec)



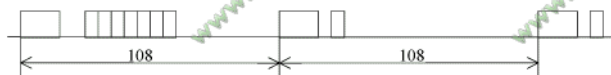
SINGLE-WORD FORMAT (msec)



REPEAT PULSE

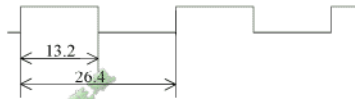


REPEAT FORMAT (msec)

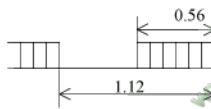


[SONY]

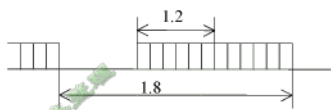
CARRIER (usec)



BIT '0' (msec)



BIT '1' (msec)



SINGLE-WORD FORMAT (msec)

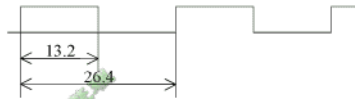


REPEAT FORMAT (msec)

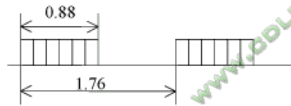


[PANASONIC]

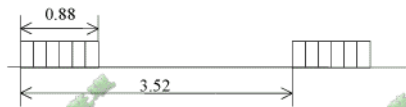
CARRIER (usec)



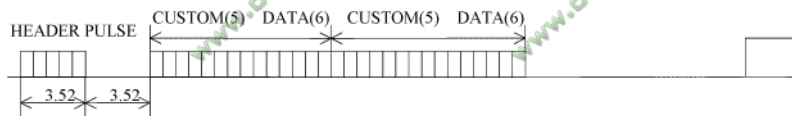
BIT '0' (msec)



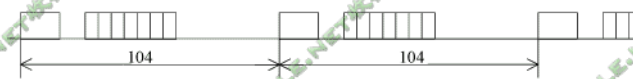
BIT '1' (msec)



SINGLE-WORD FORMAT (msec)

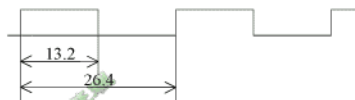


REPEAT FORMAT (msec)



[PHILIPS(RC-5)]

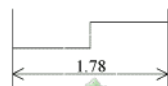
CARRIER (usec)



BIT '0' (msec)

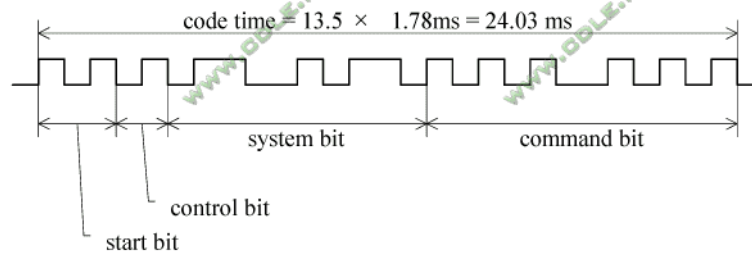


BIT '1' (msec)



- 1.5 start bits : allowing synchronizing by the micom.
- 1 control bit : this bit changes of value every time a key-out to key-in transition occurs.
- 5 system bits : make it possible to select 32 different systems
- 6 command bits : give a total of 64 possible commands.

SINGLE-WORD FORMAT (msec)



REPEAT FORMAT (msec)

