8 ELECTRICAL SPECIFICATIONS
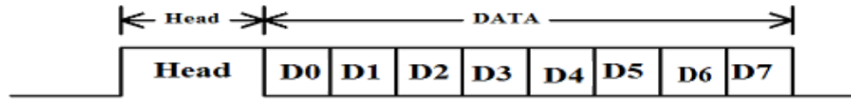
Characteristics	Symbol	Ratings
DC Supply Voltage	V_+	< 7.0V
Input Voltage Range	V_{IN}	(VSS-0.3V) to (V_+ + 0.3V)
Operating Temperature	T_A	0℃ to +70℃
Storage Temperature	T_{STO}	-65℃ to +150℃

Note: Stresses beyond those given in the Absolute Maximum Rating table may cause permanent damage to the device.　For normal operational conditions, see DC Electrical Characteristics.
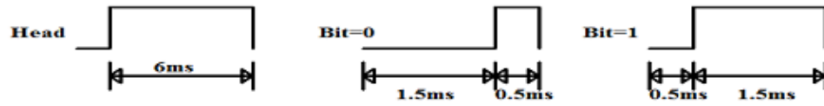
8.1 DC Characteristics (VDD = 3/4.5V (IOA ~ IOD), TA = 25℃)

Characteristics	Symbol	Limit Min.	Limit Typ.	Limit Max.	Unit	Test Condition
Operating Voltage	VDD	2.0	-	5.5	V	
Operating Current	I_{OP}	-	1.5	-	mA	F_{CPU} = 2MHz @ 3.0V, PWM output off
		-	2	-	mA	F_{CPU} = 2MHz @ 4.5V, PWM output off
Standby Current	I_{STBY}	-	-	5	uA	VDD = 3.0V
		-	-	5	uA	VDD = 4.5V
GPIO Input High Level (IOA, IOB, IOC, IOD)	V_{IH}	0.5VDD	-	-	V	VDD = 4.5V
GPIO Input Low Level (IOA, IOB, IOC, IOD)	V_{IL}	-	-	0.5VDD	V	VDD = 4.5V
Output High Current (IOA, IOB, IOC, IOD)	I_{OH}	-	10	-	mA	VDD = 3.0V, V_{OH} = 0.7*VDD
		-	20	-	mA	VDD = 4.5V, V_{OH} = 0.7*VDD
Output Low Current (Normal)	I_{OL1}	-	10	-	mA	VDD = 3.0V, V_{OL} = 0.3*VDD
		-	20	-	mA	VDD = 4.5V, V_{OL} = 0.3*VDD
Output Low Current (High sink , by Body Option)	I_{OL2}	-	20	-	mA	VDD = 3.0V, V_{OL} = 0.3*VDD
		-	40	-	mA	VDD =4.5V, V_{OL} = 0.3*VDD
Input Pull Low Resistor (IOA, IOB, IOC, IOD)	R_{L1}	-	200	-	Kohm	VDD = 3.0V, IO = 0V
		-	100	-	Kohm	VDD = 4.5V, IO = 0V
Input Pull Low Resistor (IOA, IOB, IOC, IOD)	R_{L2}	-	1000	-	Kohm	VDD = 3.0V, IO = 3.0V
		-	500	-	Kohm	VDD = 4.5V, IO = 4.5V
PWM Driver Current	I_{PWM}	-	180	-	mA	VDD = 3.0V, 8 Ohms load
		-	280	-	mA	VDD = 4.5V, 8 Ohms load
Frequency deviation by voltage drop	$\triangle$F/F	-1	-	+1	%	$\dfrac{Fosc(5.5v) - Fosc(2.4v)}{Fosc(3.0v)}$ F_{CPU} = 2MHz
Frequency lot deviation	$\triangle$F/F	-1	-	1	%	$\dfrac{Fmax(3.0v) - Fmin(3.0v)}{Fmax(3.0v)}$ F_{CPU} = 2MHz @ 3.0V (tentative)
		-1	-	1	%	$\dfrac{Fmax(4.5v) - Fmin(4.5v)}{Fmax(4.5v)}$ F_{CPU} = 2MHz @ 4.5V (tentative)

一帧数据格式:

时间说明:

例子:发送代码0XA3（B' 10100011 '）