

SM16703P

CMOS
 5~24V@
 OUT 26V
 256

17mA,
 DIN DOUT

800Kbps
 SOP8

LED
 LED /

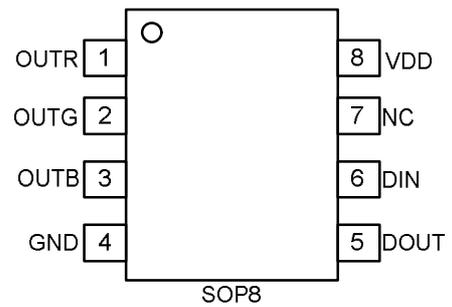
SM16703P

LED

SPWM

RC

SM16703P	SOP8	100 /	2500 /	13



OUTR		1	RED
OUTG		2	GREEN
OUTB		3	BLUE
GND		4	
DOUT		5	
DIN		6	
NC		7	
VDD		8	

Ta = 25

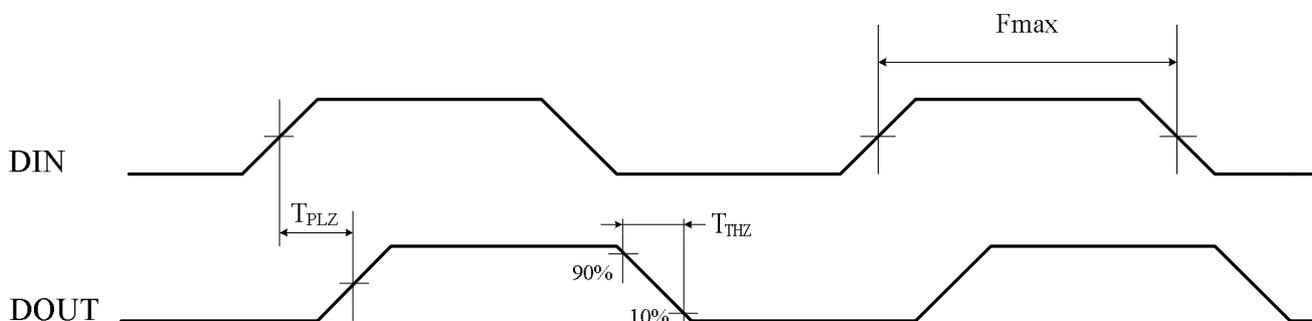
	V _{IN}	5—24	V
R/G/B	V _{DS}	26	V
	V _{I1}	-0.5—5.5	V
R/G/B	I _{OL1}	17	mA
	PD	550	mW
	T _{OPT}	-40—+85	
	T _{STG}	-50—+150	
ESD	V _{ESD}	8K	V

Ta = 25

	V _{IN}	-	-	5	24	V
	VDD	-	-	5.2	-	V
R/G/B	V _{DS,MAX}	OUT R/G/B	-	-	26	V
R/G/B	I _{OUT,R}	V _{DS,R} =1V	-	17	-	mA
DOUT	I _{DOH}	DOUT	-	49	-	mA
	I _{DOL}	DOUT VDD	-	-50	-	mA
	V _{IH}	VDD=5.0V	-	3.4	-	V
	V _{IL}		-	1.6	-	V
R/G/B	%VS.V _{DS}	V _{DS} =1~5V,I _{OUT} =17 mA	-	0.5	-	%
	%VS.VDD	VDD=1~5V,I _{OUT} =17 mA	-	0.3	-	%
	%VS.Tem.	V _{DS} =1~5V,I _{OUT} =17 mA,Tem.= -40~+85	-	4.0	-	%
R/G/B	V _{DS}	I _{OUT} =17 mA	0.8	-	-	V
PWM	f _{PWM}	-	-	1.2	-	KHZ
	I _{DD}	-	-	2.0	-	mA

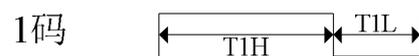
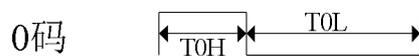
Ta = 25

	f _{DIN}	67%(1)	-	800	-	KHZ
DOUT	t _{PLZ}	DIN→DOUT	-	-	500	ns
	t _{PLZ}		-	-	500	ns
I _{OUT}	T _r	V _{DS} =1.5	-	32	-	ns
	T _f	I _{OUT} =17mA	-	27	-	ns



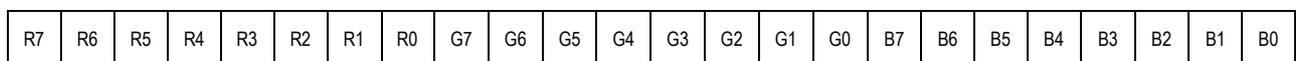
“0” “1”

输入码型:



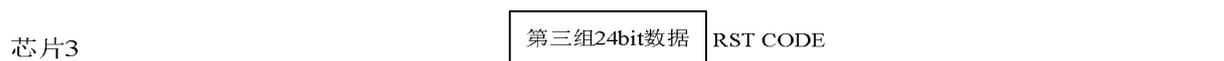
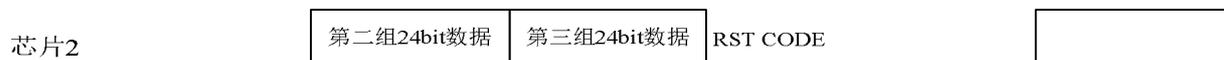
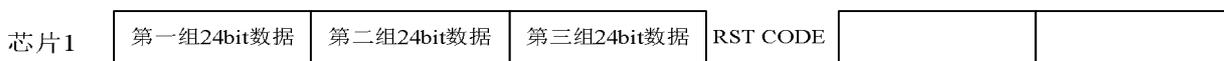
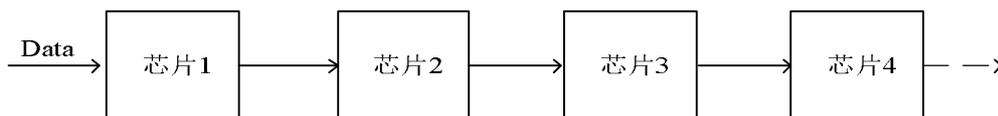
T0H	0	-	0.3	-	±0.05	us
T1H	1	-	0.9	-	±0.05	us
T0L	0	-	0.9	-	±0.05	us
T1L	1	-	0.3	-	±0.05	us
Trst	Reset	-	80	-	-	us

RGB

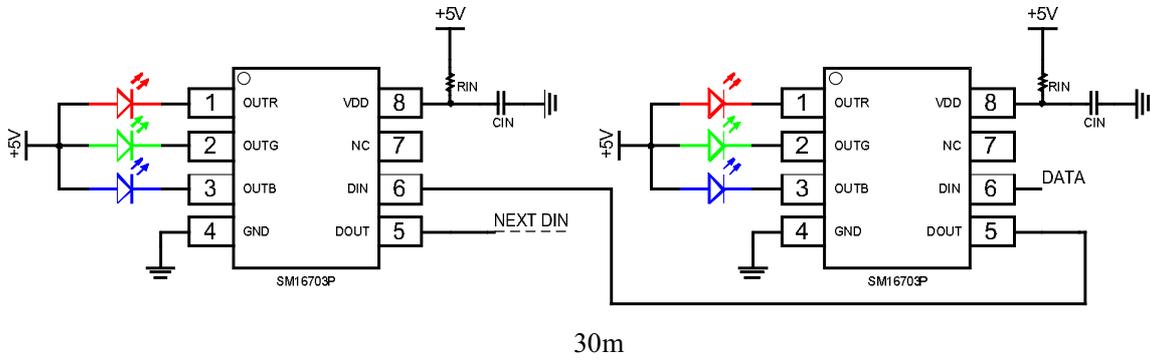


bit23.....bit0

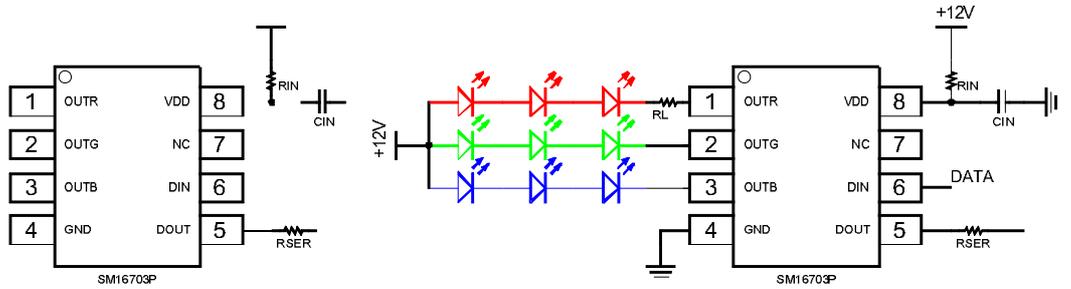
DIN Trst+ 1 24bit + 2 24bit +.....+ N 24bit



1 5V LED



2 12V 3 LED

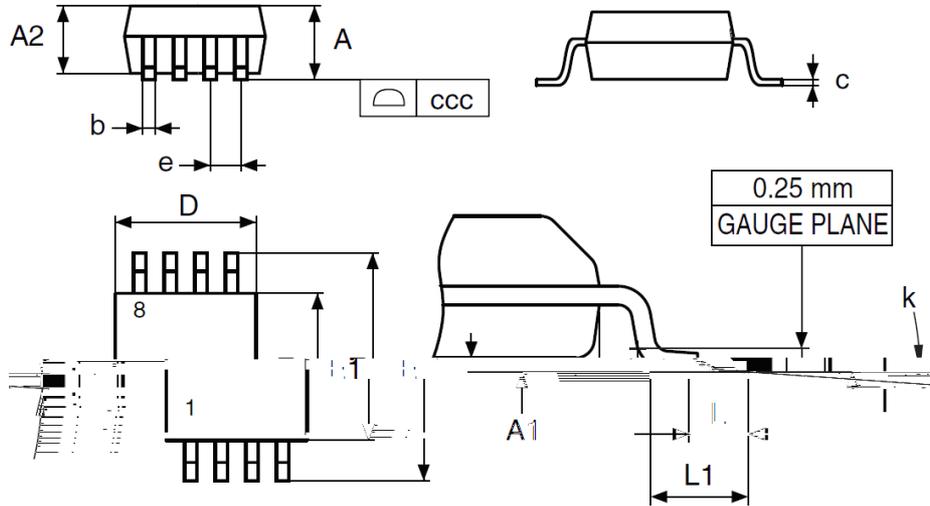


SM16703P V_{IN} R_{IN} VDD C_{IN} R/G/B LED
 R_L
 V_{DD} $V_{DD} = V_{IN} - (I_{DD} + I_{IN}) * R_{IN}$
 I_{IN} I_{DD} R_{IN} $V_{DD} > 4V$

	R_{IN}				R_{IN}		
		R_{IN}	V_{IN}	R_{IN}			
V_{IN}	5V	6V	9V	12V	15V	18V	24V
R_{IN}	33	100	470	1K	1.5K	2K	3K

SM16703P DOUT C_L DOUT C_L
 60mA R_{IN} VDD C_{IN} VDD C_L
 1nF C_{IN} 0.1uF
 LED R_L $R_L = \frac{V_{IN} - V_{LED}}{I_{LED}}$
 V_{IN} V_{LED} LED V_{DS} 1V I_{LED}

SOP8



DIMENSIONS						
REF.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			1.75			0.0689
A1	0.1		0.25	0.0039		0.0098
A2	1.25			0.0492		
b	0.28		0.48	0.011		0.0189
c	0.17		0.23	0.0067		0.0091
ccc			0.1			0.0039
D	4.8	4.9	5	0.189	0.1929	0.1969
E	5.8	6	6.2	0.2283	0.2362	0.2411
E1	3.8	3.9	4	0.1496	0.1535	0.1575
e		1.27			0.05	
h	0.25		0.5	0.0098		0.0197
k	0		8	0		8
L	0.4		1.27	0.0157		0.05
L1		1.04			0.0409	