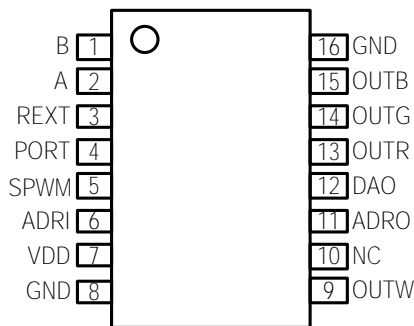


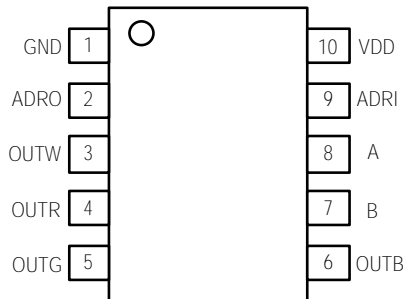
SM16512P

OUTR/G/B/W 17mA REXT
60mA
100% 50%
A/B
OUTR/G/B/W 26V
5V~24V
SPWM 256
SPWM OUT
3.3KHZ
800HZ
DMX512(1990)
250kbps~750kbps
EEPROM 4096
485
1/3/4
SOP16 SSOP10
LED
LED /

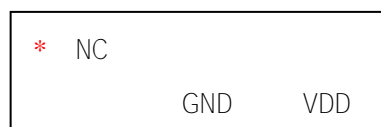
SM16512P LED
DMX512 1990
485
17mA
REXT (256)
SPWM
OUT EEPROM
8



SM16512P(SOP16)



SM16512PS(SSOP10)



业务电话: 400-033-6518

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		SM16512P SOP16	SM16512PS SSOP10	
B	-	1	7	DMX512 -
A	+	2	8	DMX512 +
REXT		3	-	REXT GND OUTR/G/B/W
PORT		4	-	"1" "0" (5V)
SPWM		5	-	"1" , 5V OUT 3.3KHZ "0" OUT 800HZ
VDD		7	10	5V
NC		10	-	(GND VDD)
ADRI		6	9	
ADRO		11	2	
DAO		12	-	
OUTR/G/B/W		13-15,9	4-6,3	LED
GND		8,16	1	

SM16512P	SOP16	50 /	4000 /	13
SM16512PS	SSOP10	100 /	4000 /	

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Ta = 25

	VDD	-0.5——+5.5	V
OUTR/G/BW	V _{OUT}	25	V
	V _{II}	-0.5——VDD+0.5	V
LED	I _{OL1}	60	mA
	PD	<250	mW
	T _{OPT}	-40——+125	
	T _{STG}	-65——+150	
ESD	V _{ESD}	>2K	V

Ta = 25

	VDD	—	5	—	24	V
OUTR/G/BW	I _{OUT}	VDD = 5.0V	3	—	60	mA
LED	F _{PWM}	SPWM 1" VDD=5.0V OUT 120 5V	—	3.3K	—	HZ
		SPWM 0" VDD=5.0V OUT 120 5V	—	800	—	HZ
V _{OUT}	V _{OUT}	I _{OUT} =17mA	—	0.7	—	V
		I _{OUT} =35mA	—	1.0	—	V
REXT	V _{REXT}	VDD=5.0V DAI VDD REXT OUTR/G/BW DAO	—	1.20	—	V
	R _{IN}	—	—	200	—	K
	V _{CM}	—	—	—	12	V
	I _{AB}		—	—	28	uA
			-200	—	200	mV
		VDD=5V B=2.5V	—	80	—	mV
DAO	I _{OH}	DAO	-50	—	-65	mA
	I _{OL}	DAO	50	—	55	mA
	I _{DD}	VDD = 5.0V REXT	—	3.6	—	mA
OUTR/G/BW	I _{leak}	VDD = 5.0V, VDS=30V	—	—	1	uA

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REXT

OUTR/G/B/W

17mA

17mA-60mA

= + —

REXT

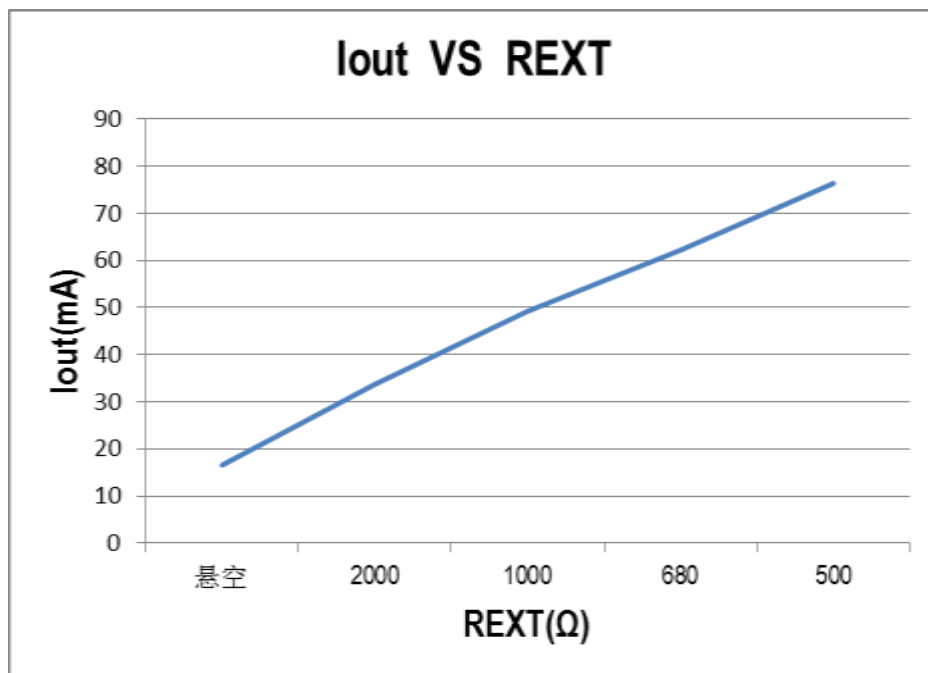
17mA

34mA, REXT

2K

Iout

REXT



1 SM16512P

Iout

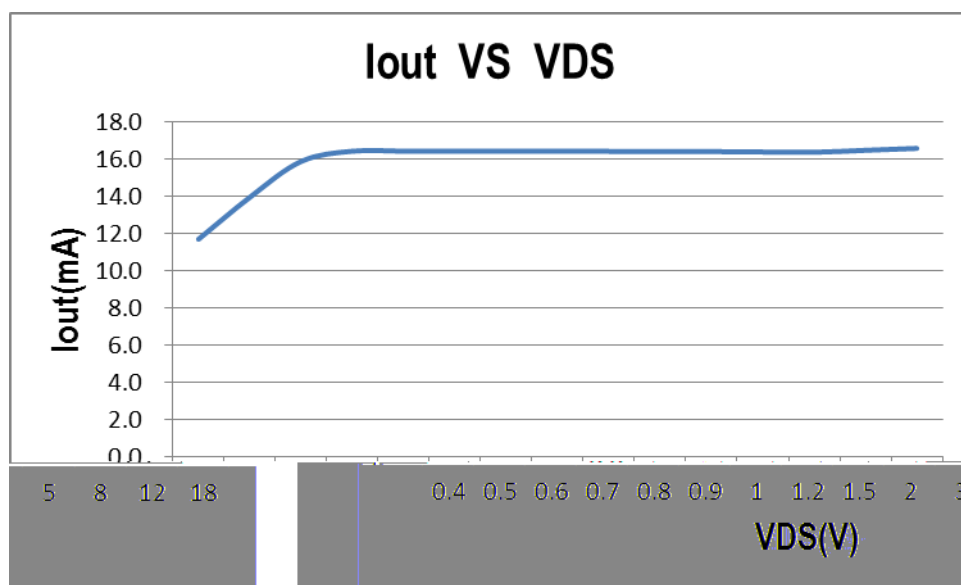
REXT

REXT

Iout

OUTR/G/B/W

VDS



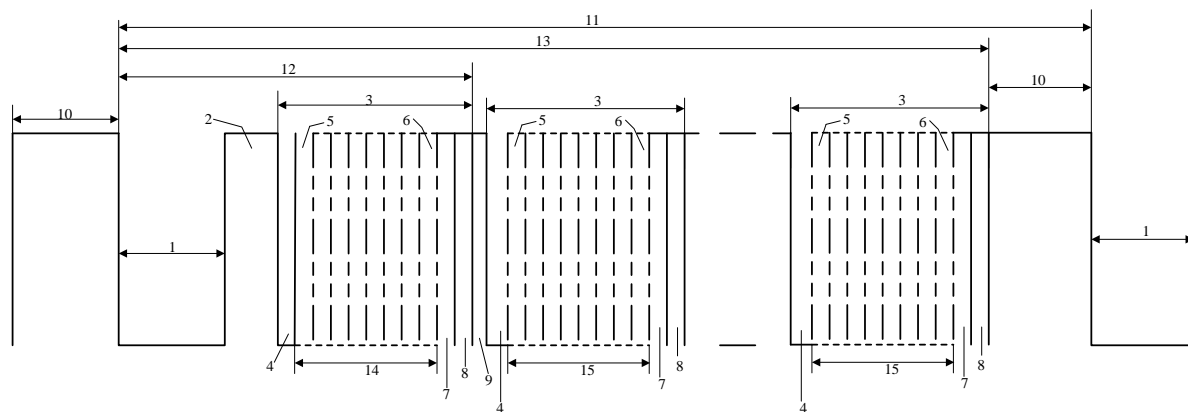
2 SM16512P

Iout

VDS

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3 DMX512(1990)

Figuer Key

- 1- "SPACE" for BREAK
- 2- "MARK" After BREAK (MAB)
- 3- Slot Time
- 4- START Bit
- 5- LEAST SIGNIFICANT Data BIT
- 6- MOST SIGNIFICANT Data BIT
- 7- STOP Bit
- 8- STOP Bit
- 9- "MARK" Time Between slots
- 10- "MARK" Before BREAK (MBB)
- 11- BREAK to BREAK Time
- 12- RESET Sequence (BREAK, MAB, START Code)
- 13- DMX512 Packet
- 14- START CODE (Slot 0 Data)
- 15- SLOT 1 DATA
- 16- SLOT nnn DATA (Maximun 512)

Designation	Description	Min	Typical	Max	Unit
-	Bit Rate	245	250	255	kbit/s
-	Bit Time	3.92	4	4.08	us
-	Minimum Update Time for 513 slots	-	22.7	-	ms
-	Maximum Update Rate for 513 slots	-	44	-	/s
1	"SPACE" for BREAK	88	-	-	us
2	"MARK" After BREAK (MAB)	8	-	<1.00	us s
9	"MARK" Time Between slots	0	-	<1.00	s
10	"MARK" Before BREAK (MBB)	0	-	<1.00	s
11	BREAK to BREAK Time	1196	-	1.00	us s
13	DMX512 Packet	1196	-	1.00	us s

DMX512 1990

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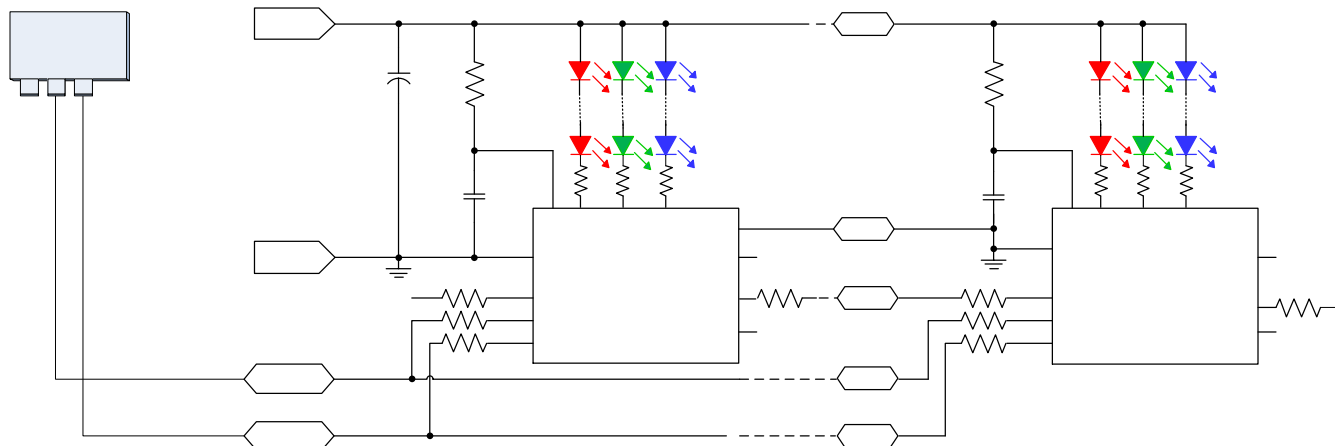
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DMX512 1990

1024

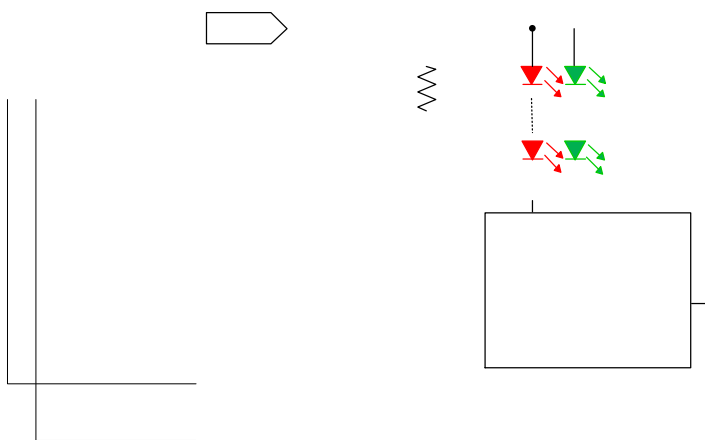
A/B

1 SM16512P RGB



4 SM16512P RGB

2 SM16512P RGBW



5 SM16512P RGBW

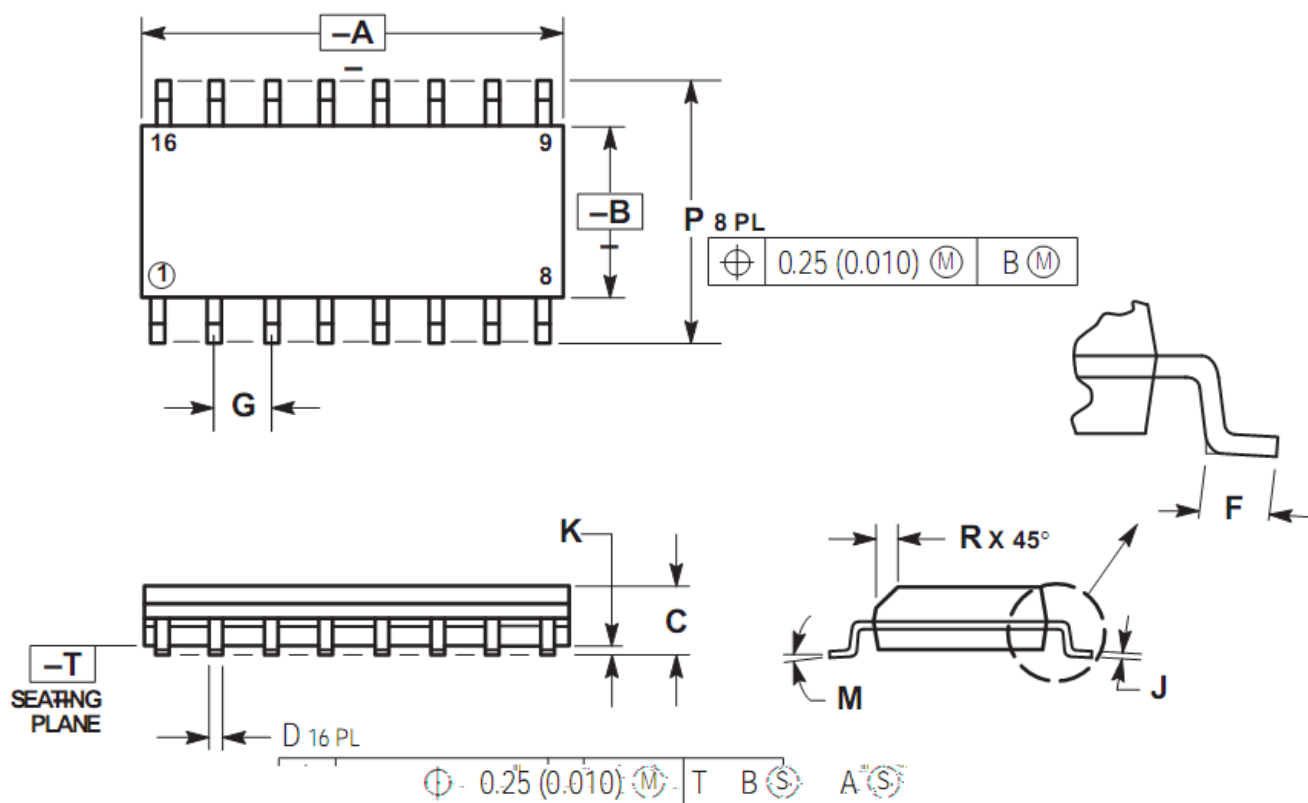
SM16512P	V_{IN}	R_{IN}	VDD	C_{IN}	R/G/B/W	LED		
R_R R_G R_B R_W	R_{AI}		R_{AO} A/B		R_A R_B			
1 V_{IN}	R_{IN}							
	V_{DD}	$V_{DD}=V_{IN}-(I_{DD}+I_{IN})\cdot R_{IN}$						
	I_{IN}		I_{DD}		R_{IN}			
$V_{DD} > 3V$	R_{IN}				R_{IN}			
		R_{IN}	V_{IN}		R_{IN}			
V_{IN} V	5V	6V	9V	12V	15V	18V	24V	
R_{IN}	33	100	470	1K	1.5K	2K	3K	
2 C						0.1uF-10uF		
3 C_{IN}			VDD		C_{IN}	100nF		
4 R_A R_B A/B				A B				
5 R_{AI}								
6 R_{AO}								
7 R_R R_G R_B R_W	OUTR/G/B/W				OUTR/G/B/W			
	$R_R/R_G/R_B/R_W=$				V_{IN}	V_{LED}	LED	I_{LED}
	V_{DS}	OUTR/G/B/W	1V	OUTR/G/B/W				
		OUTR/G/B/W			OUTR/G/B/W	V_{DS}	3.0V	
			V_{LED}		2.0-2.2V		3.0-3.2V	
	3.0-3.2V		3.0-3.2V					

V_{IN}	OUTR/G/B/W LED	$R_{IN}(\)$	C_{IN} nF	$R_A(\)$	$R_B(\)$	$R_{AI}(\)$	$R_{AO}(\)$	$R_R(\)$	$R_G(\)$	$R_B(\)$	$R_W(\)$
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SOP16

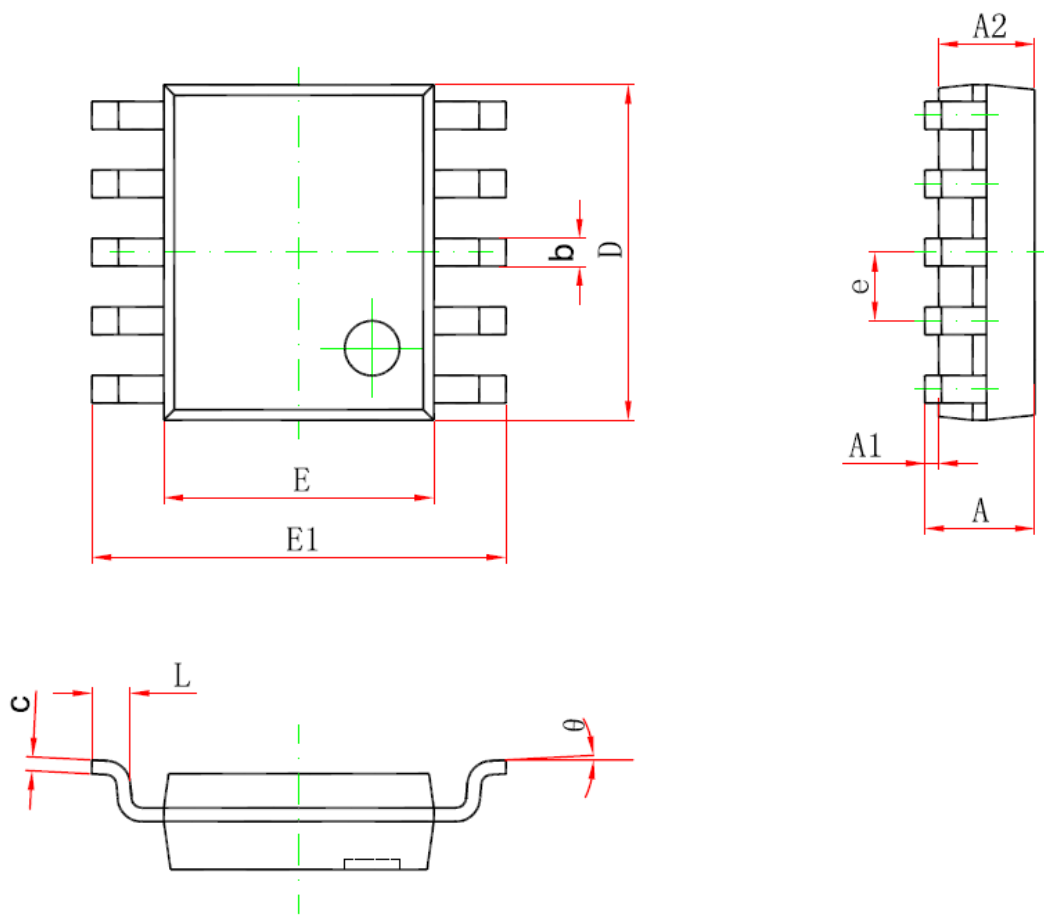


Datasheet		
Millimeters		
	Min	Max
A	9.80	10.16
B	3.80	4.04
C	1.35	1.80
D	0.25	0.510
F	0.40	1.27
G	1.27BSC	
J	0.19	0.25
K	0.05	0.25
M	0°	8°
P	5.80	6.30
R	0.25	0.50

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SSOP10



Symbol	Millimeters		Inchs	
	Min	Max	Min	Max
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.300	0.450	0.012	0.018

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