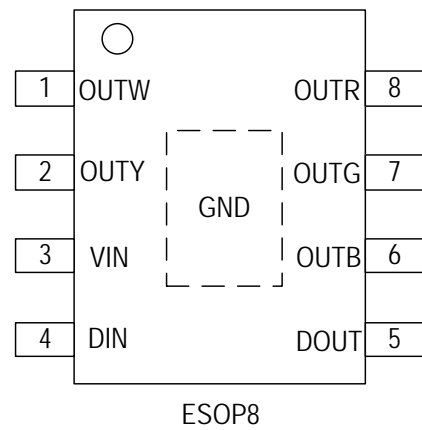
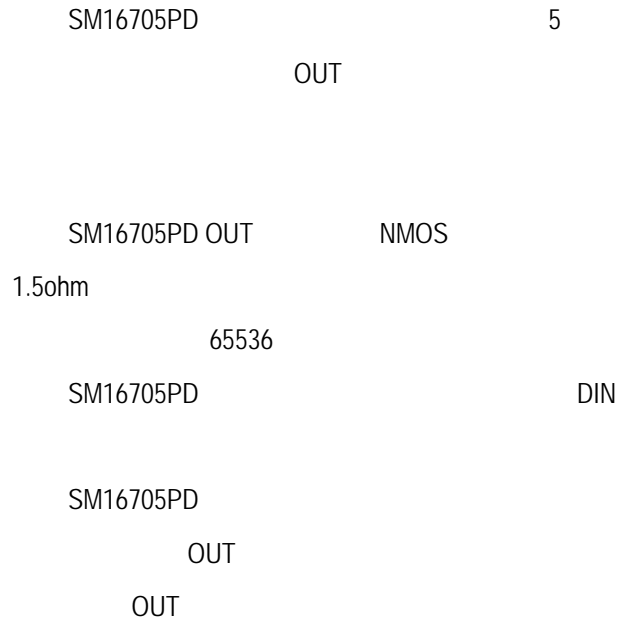
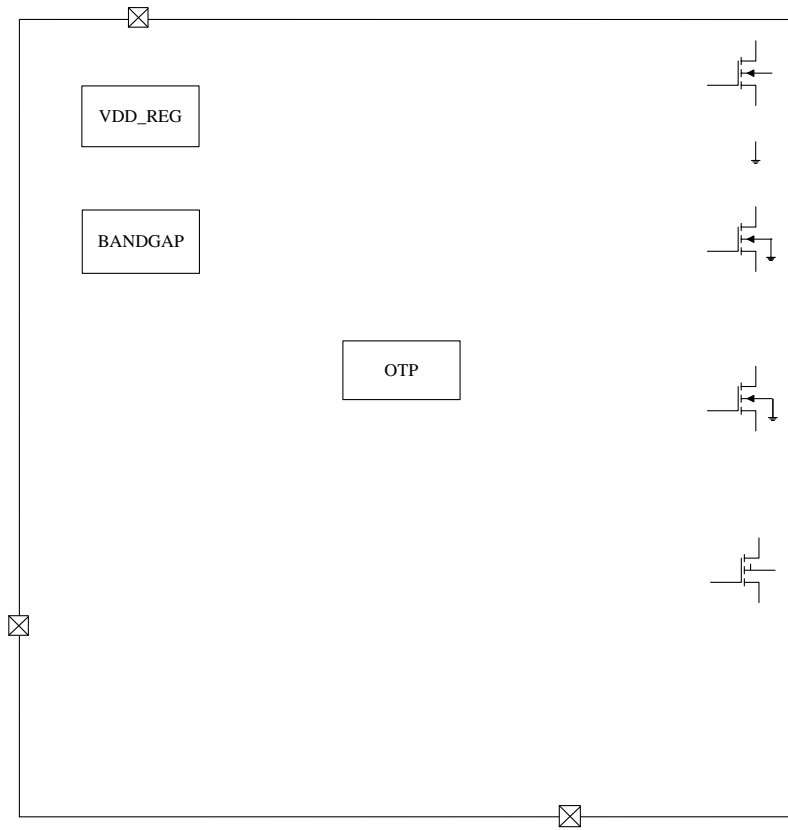


# SM16705PD

- ◆ 5~40V
- ◆ OUT
- ◆ OUT BV>40V
- ◆ OUT NMOS 1.5ohm@100mA
- ◆
- ◆ 800Kbps
- ◆ 65536
- ◆ 60ns
- ◆ OUT PWM 4KHz
- ◆ OUT
- ◆
- ◆ DIN→DOUT
- ◆
- ◆
- ◆
- ◆ ESOP8
- ◆
- ◆ LED
- ◆ LED





$T_A=25^{\circ}\text{C}$

$V_{IN}$	1		4-40	V
$V_I$			-0.4-7.5	V
$BV_{OUT}$	OUT		45	V
$R_{\theta JA}$	PN 2	ESOP8	65	$^{\circ}\text{C/W}$
$P_D$	3	ESOP8	1.25	W
$T_J$			-40-150	$^{\circ}\text{C}$
$T_{stg}$			-55-150	$^{\circ}\text{C}$
$V_{HBM}$	HBM		2	KV

1  $V_{IN}=4V$

DIN

$V_{IN}<4V$

DIN

$V_{IN}$

$\geq 5V$

2  $R_{\theta JA}$   $T_A=25^{\circ}\text{C}$

JEDEC JESD51

3

$T_{JMAX}$   $R_{\theta JA}$

$T_A$

$P_D = (T_{JMAX}-T_A) / R_{\theta JA}$

4 5

V<sub>IN</sub>=24V T<sub>A</sub>=25°C

V <sub>IN</sub>		-	5	-	40	V
V <sub>Clamp</sub>		V <sub>IN</sub> =24V R <sub>IN</sub> =2.2KΩ	4.5	5.0	5.3	V
I <sub>DD</sub>		OUT	-	0.7	0.9	mA
		OUT	-	50	-	uA
V <sub>IH</sub>	DIN	DIN	2.8	-	-	V
V <sub>IL</sub>	DIN	DIN	-	-	1.5	V
I <sub>OH</sub>	DOUT	DOUT	-	25	-	mA
I <sub>OL</sub>	DOUT	DOUT	-	27	-	mA
R <sub>D<sub>S</sub>ON</sub>	OUT	I <sub>OUT</sub> RGBWY = 100mA	1.3	1.5	1.7	Ω
f <sub>PWM</sub>	OUT PWM	OUT	3.5	4.0	4.5	KHz
BV <sub>OUT</sub>	OUT	OUT 1uA	40	-	-	V
T <sub>OTP</sub>	6	-	152	160	168	°C
		-	-	40	-	°C
R <sub>down_DIN</sub>	DIN	-	80	100	120	KΩ
t <sub>PHL</sub> /t <sub>PLH</sub>	OUT	OUT	-	120	-	ns
t <sub>TLH</sub>	I <sub>OUT</sub>	OUT I <sub>OUT</sub> =100mA C <sub>L</sub> =20pF	-	15	-	ns
t <sub>THL</sub>	I <sub>OUT</sub>		-	12	-	ns

4

5

6

160°C

SM16705PD

"0" "1"

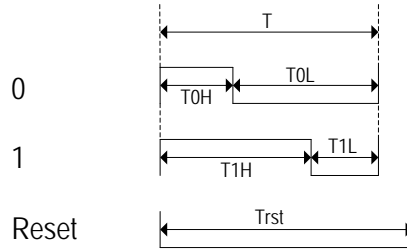


Fig. SM16705PD

T		1200	-	-	ns
T0H	0	200	300	400	ns
T0L	0	800	900	-	ns
T1H	1	800	900	1000	ns
T1L	1	200	300	-	ns
Trst	Reset	200	-	-	us

7 1.2us 8 0 1 0 1 20us

SM16705PD

80 bits

OUTR/G/B/W/Y 16bits

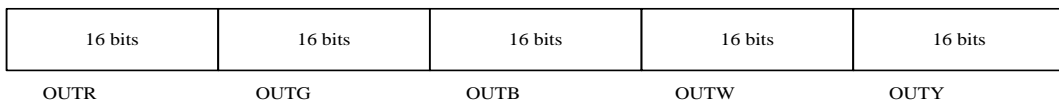


Fig. SM16705PD

SM16705PD

RESET

N

RGBWY

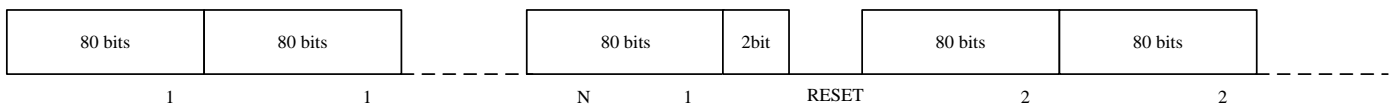


Fig. SM16705PD

SM16705PD

DIN

2 b01

50uA

DIN

SM16705PD

160°C

120°C

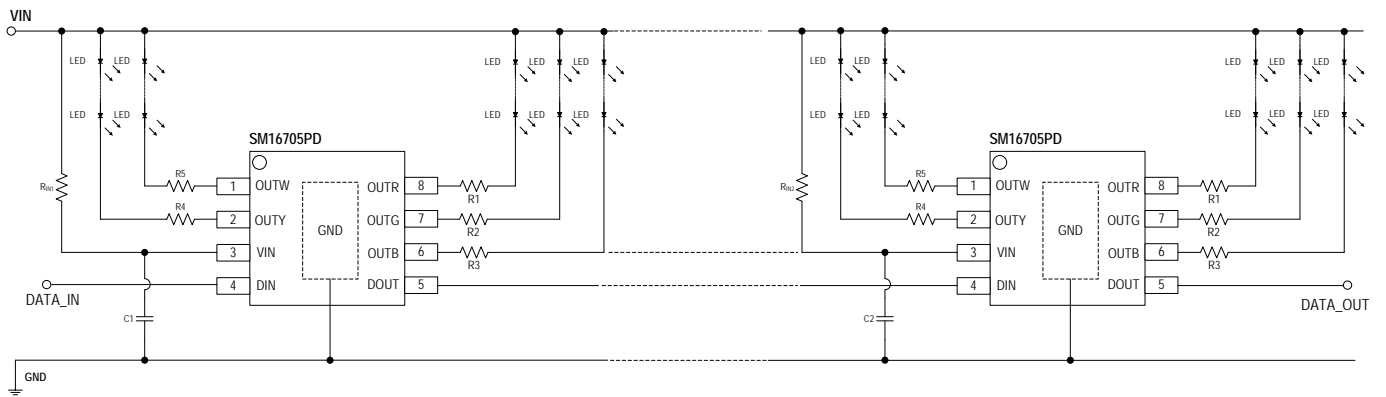
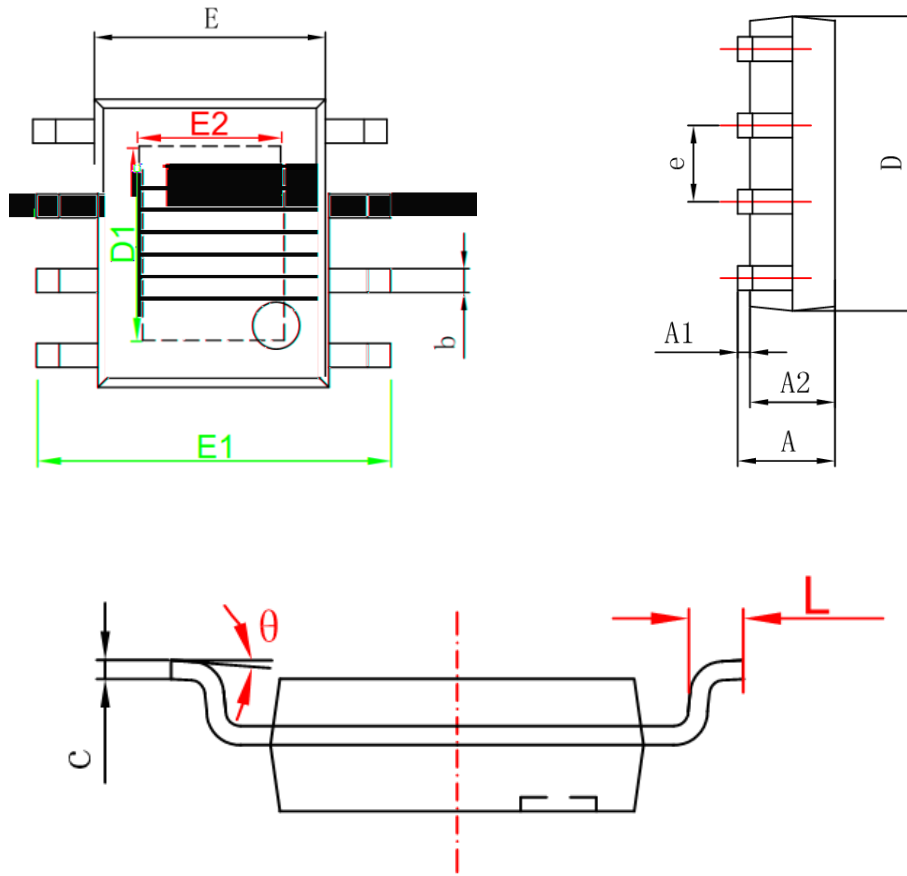


Fig. SM16705PD

VIN

	R1-R10	OUT	OUT
	R <sub>IN1</sub> R <sub>IN2</sub>	VIN	2.2K~4.7KΩ
	C1 C2	VIN	100nF/50V 1uF/50V

ESOP8

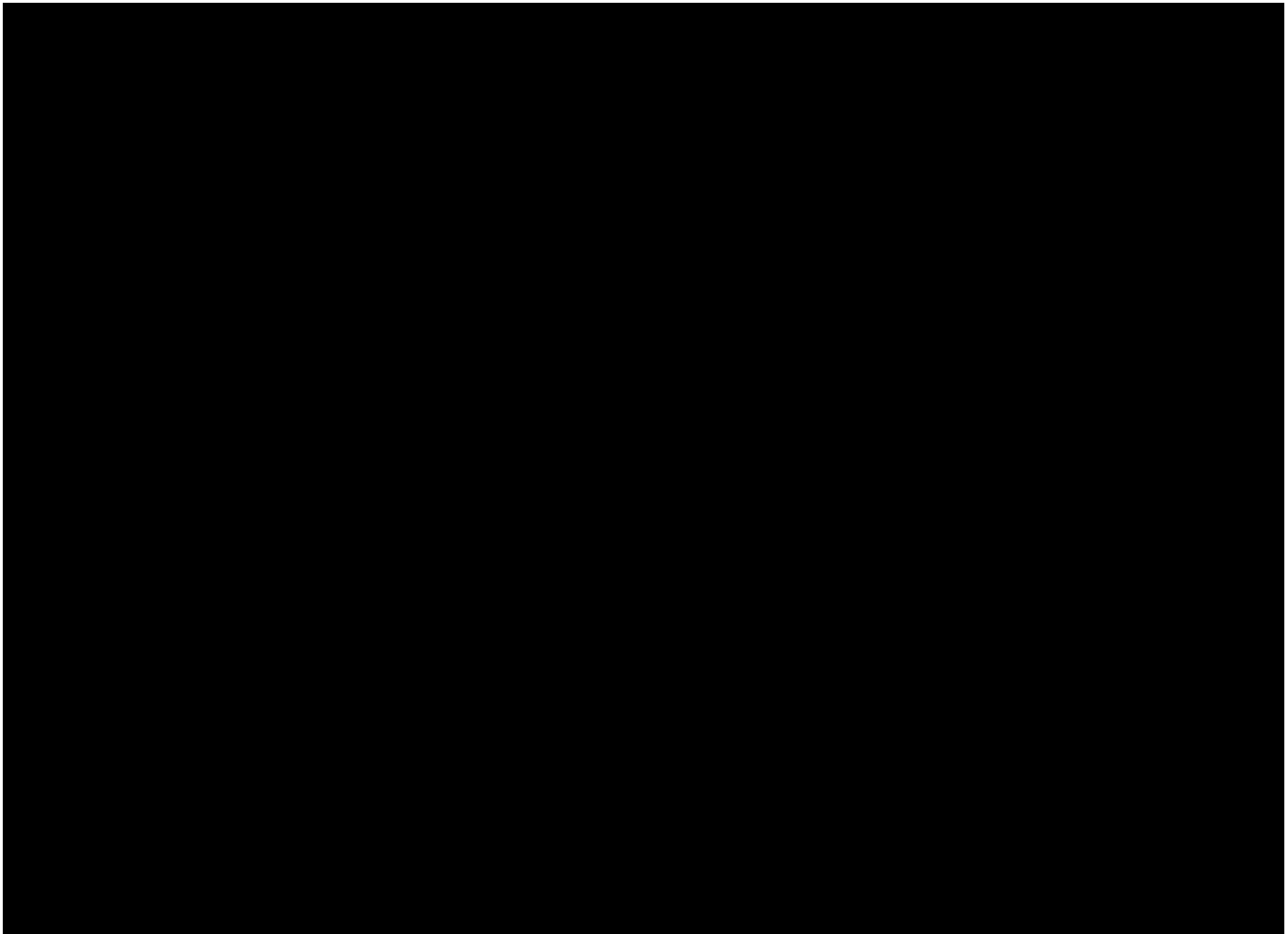


Symbol	Min(mm)	Max(mm)
A	1.25	1.95
A1	-	0.1
A2	1.25	1.75
b	0.25	0.7
c	0.1	0.35
D	4.6	5.3
D1	3.12(REF)	
E	3.7	4.2
E1	5.7	6.4
E2	2.34(REF)	
e	1.270(BSC)	
L	0.2	1.5
$\theta$	0°	10°



RoHs

J-STD-020



mm<sup>3</sup> < 350

mm f0 mmmm