概述

CYTLP1019是一块小外形的贴片光电耦合器件，适合表面贴装生产。CYTLP1019是由一个砷化镓发光二极管和一个光电晶体管组成的光电耦合器，适用于高密度表面贴装应用，如可编程控制器等。

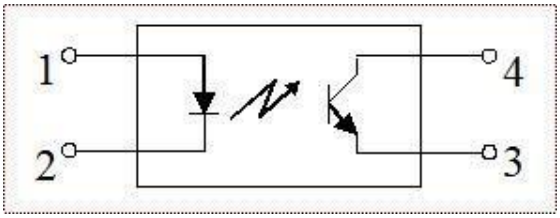
特性

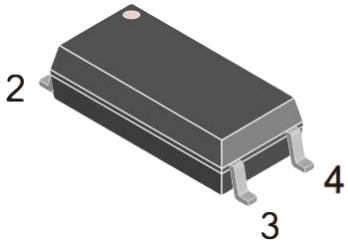
- 电流转换比 (CTR)范围: 50~600% （I_F =5mA ,V_{CE} =5V）
- 输入-输出隔离电压 (Viso=5000 Vrms)
- 集电极-发射极击穿电压 BV_{CEO}≥80V
- 工作温度：-55~110° C
- 8mm 长爬电距离
- UL 认证（NO.:E497745）
- 符合 EU REACH 和 RoHS

Applications

- 开关电源，智能电表
- 工业控制，测量仪器
- 办公设备，比如复印机
- 家用电器，比如空调、风扇、热水器等

结构原理图和封装





极限参数 (Ta=25℃)

参数		符号	额定值	单位
输入	正向电流	I_F	50	mA
	正向脉冲电流	I_{FP}	1	A
	反向电压	V_R	6	V
	功耗	P	70	mW
	结温	Tj	125	℃
输出	集电极功耗	P_C	150	mW
	集电极电流	I_C	50	mA
	集电极-发射极电压	V_{CEO}	80	V
	发射极-集电极电压	V_{ECO}	7	V
	结温	Tj	125	℃
总功耗		Ptot	250	mW
隔离电压		Viso	5000	Vrms
工作温度		Topr	-55~+110	℃
储存温度		Tstg	-55~+125	℃
焊接温度		Tsol	260(10s)	℃

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光电特性 (Ta=25°C)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
输入	正向电压	V_F	I_F=20mA		1.2	1.4	V
	反向电流	I_R	V_R=5V	-	-	10	μA
	输入端电容	C_{in}	V=0, f=1kHz	-	30	250	pF
输出	集电极暗电流	I_{CEO}	V_{CE}=70V	-	-	100	nA
	集电极-发射极击穿电压	BV_{CEO}	I_C=0.1mA, I_F=0	80	-	-	V
	发射极-集电极击穿电压	BV_{ECO}	I_E=0.1mA, I_F=0	7	-	-	V
传输特性	电流转换比	CTR	I_F=5mA, V_{CE}=5V	50	-	400	%
	集电极-发射极饱和压降	$V_{CE(sat)}$	I_F=20mA, I_C=1mA	-	0.1	0.2	V
	隔离电阻	R_{ISO}	DC1000V, 40~60%R.H.	$1x10^{11}$	-	-	Ω
	隔离电容	Cf	V=0, f=1MHz	-	0.6	1.0	pF
	集电极-发射极电容	C_{CE}	V=0, f=1MHz		10		pF
	输入-输出电容	C_S	V=0, f=1MHz		0.8		pF
	截止频率	Fc	V_{CE}=5V, I_C=2mA, R_L=100Ω, -3dB	-	80	-	kHz
开关时间	上升时间	Tr	V_{CE}=10V, I_C=2mA, R_L=100Ω	-	3	18	μs
	下降时间	Tf		-	4	18	μs

* CTR=I_C/I_F x 100%

CTR 分级表

型号	分级标准	电流转换率(%)(I_C/I_F)					
		I_F = 5mA, V_{CE} = 5V, Ta = 25°C			I_F = 1mA, V_{CE} = 0.4V, Ta = 25°C		
		Min	Type	Max	Min	Type	Max
CYTLP1019	Blank	50	-	600			
	A	80	-	160			
	B	130	-	260	-	60	-
	C	200	-	400	30	-	-
	D	100		300			

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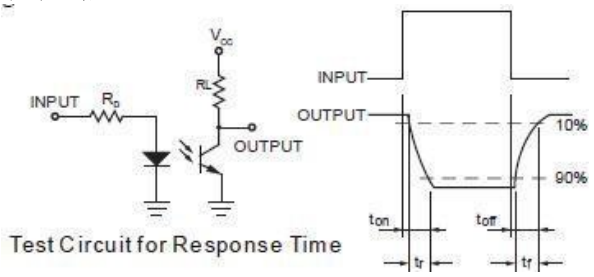
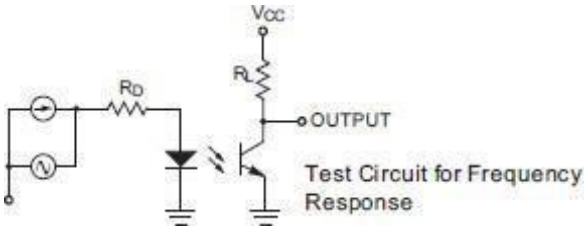
测试电路

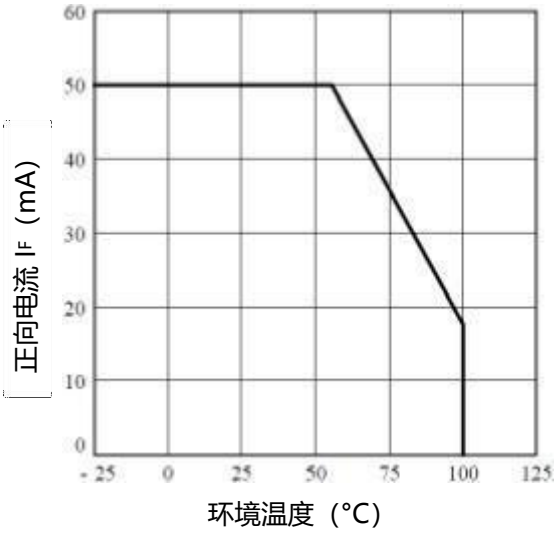


Test Circuit for Response Time

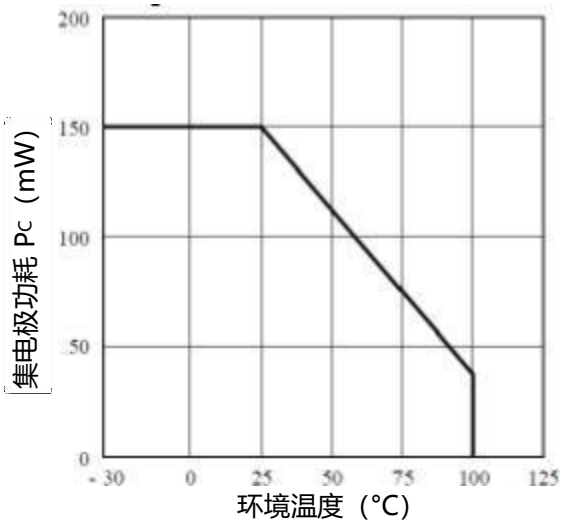


Test Circuit for Frequency Response

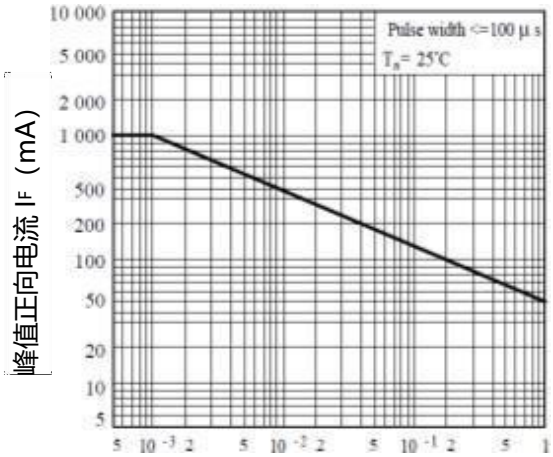
I_F-Ta



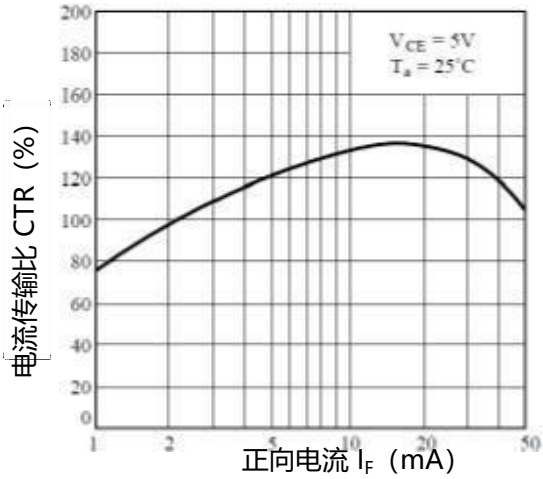
P_C-Ta



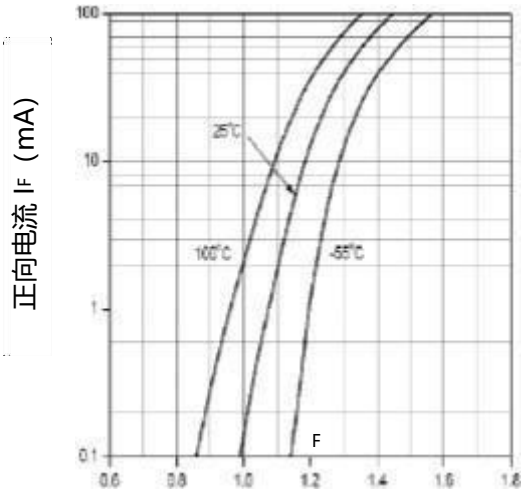
I_{FM}-D_R



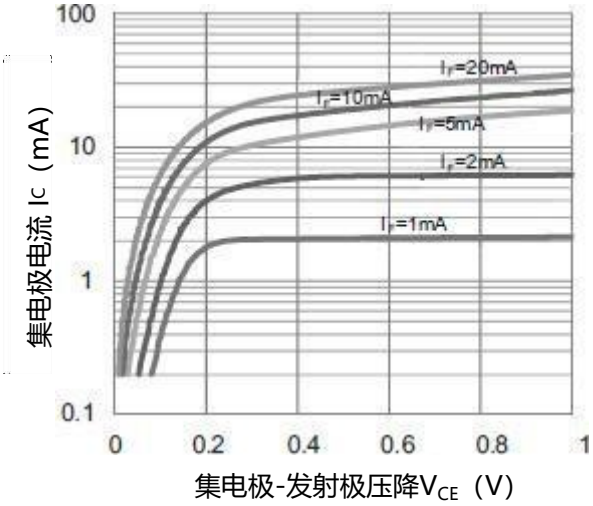
CTR- I_F



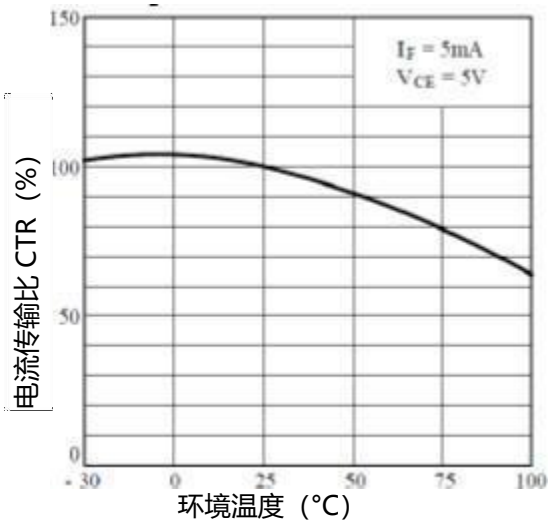
I_F-V_F



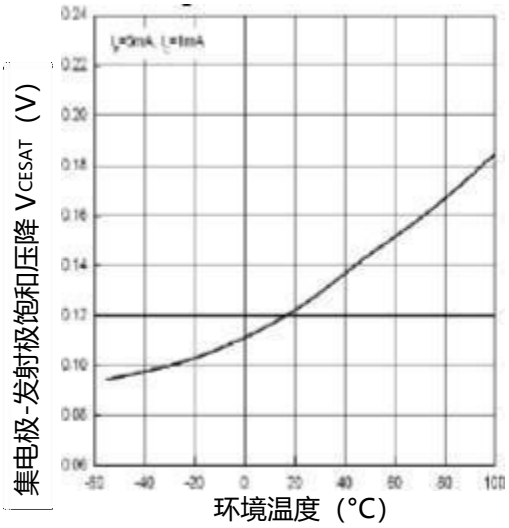
I_C-V_{CE}



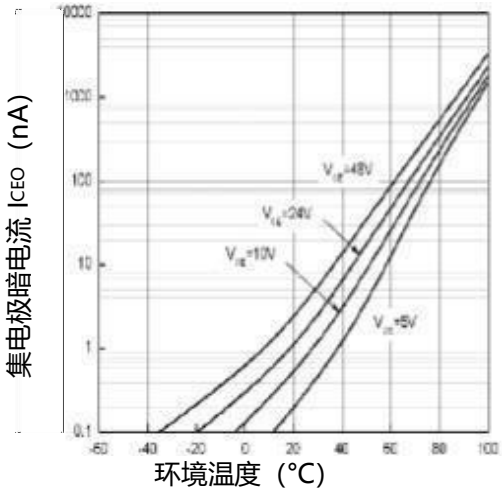
CTR-Ta



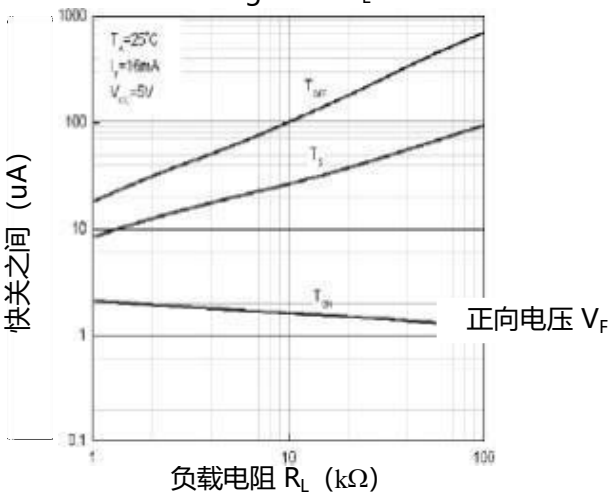
$V_{CE(SAT)}$-Ta



I_{CEO}-Ta



Switching Time-R_L



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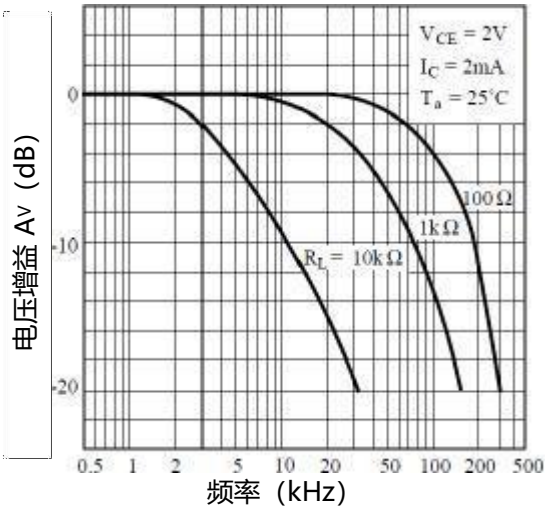
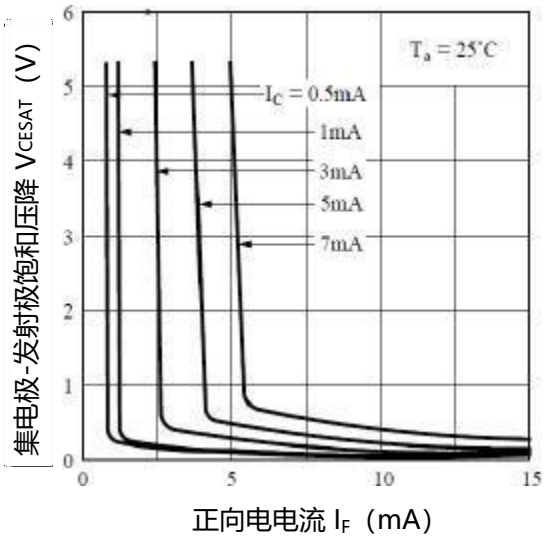
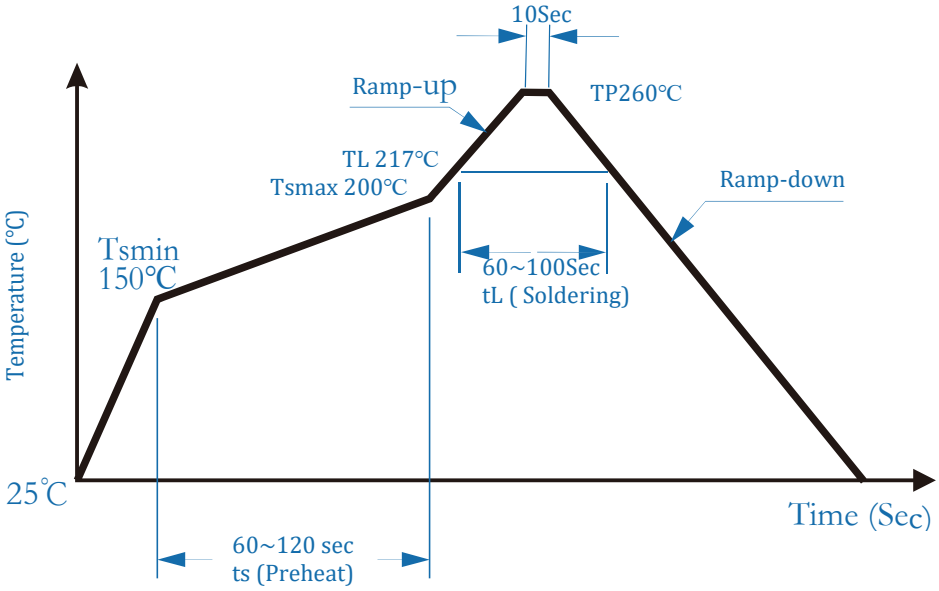
Av-f



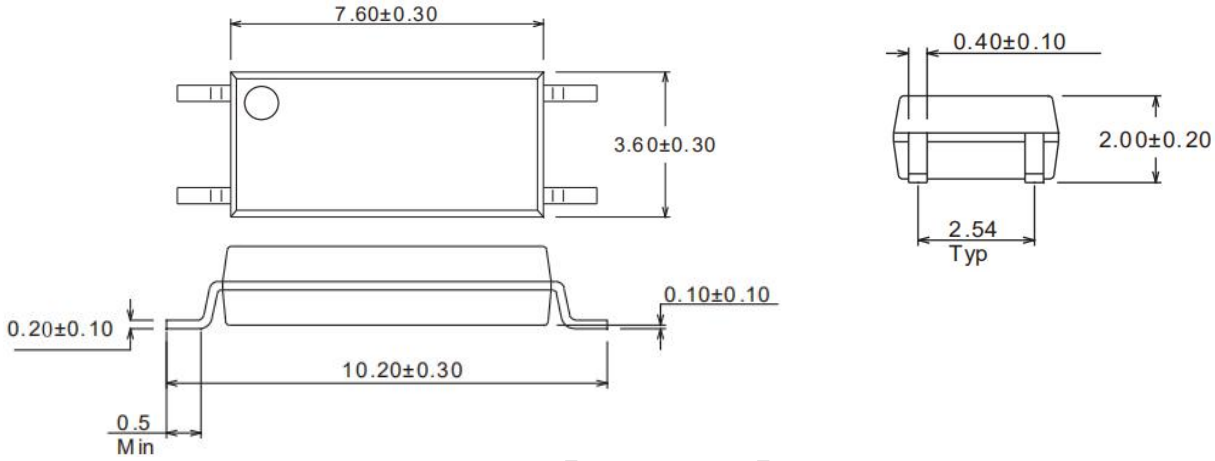
VCE(SAT)-IF



回流焊温度曲线图



外观尺寸



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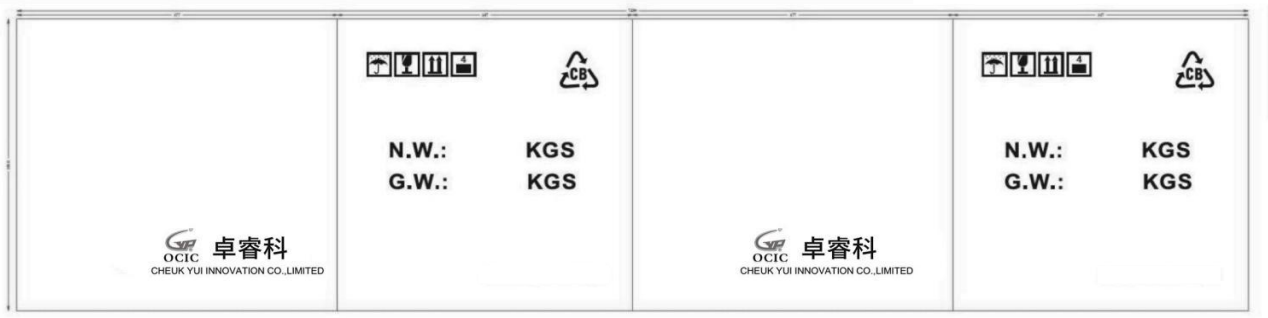
包装

封装形式	包装方式	盘数量	盒数量	箱数量	静电袋	盒规格	箱规格
LSOP4	卷盘 (ϕ330mm)	3,000PCS/盘	6,000PCS/盒	60,000PCS/箱	-	340*340*60mm	620*360*365mm

1) 内盒尺寸

2) 外箱尺寸



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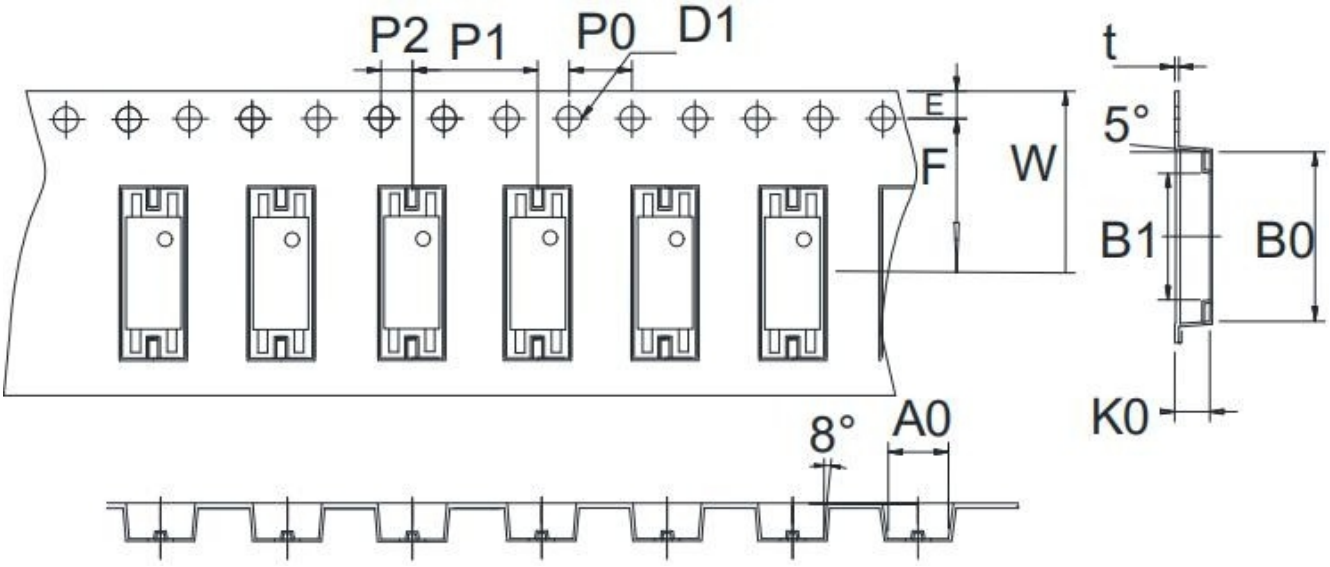
编带尺寸



A0	B0	B1	K0	D0	P0
3.9±0.15	10.75±0.15	8.05±0.15	2.25±0.15	1.55±0.10	4.00±0.10
P1	W	E	F	P2	t
8.00±0.10	16.00±0.15	1.75±0.10	7.50±0.10	2.00±0.10	0.30±0.02

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