

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

MTLP185

产品手册

描述

MTLP185 是一块小外形的贴片光电耦合器件，适合表面贴装生产。MTLP185 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，它的体积比 DIP 小，适用于高密度表面贴装应用，如可编程控制器等。

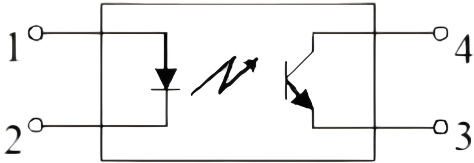
特性

- 电流转换比 (CTR)范围: 50~600% ($I_F=5mA, V_{CE}=5V$)
- 输入-输出隔离电压 ($V_{iso}=3750\text{ Vrms}$)
- 集电极-发射极击穿电压 $BV_{CEO} \geq 80V$
- 工作温度: $-55\sim110^{\circ}C$

应用领域

- 开关电源，智能仪表
- 工业控制，测量仪器
- 复印机等办公设备
- 家用电器：如空调、风扇、热水器等。

封装信息及内部引脚配置

封装	引脚配置
	
SOP-4	

订单信息

型号	封装	最小包装
MTLP185	SOP-4	3000

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	T _j	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 _{CE0}	80	V
	发射极-集电极电压	V _{EC0}	7	V
	结温	T _j	125	℃
总功耗		P _{tot}	200	mW
隔离电压		V _{iso}	3750	V _{rms}
工作温度		T _{opr}	-55~+110	℃
储存温度		T _{stg}	-55~+125	℃
焊接温度		T _{sol}	260(10s)	℃

CTR分级表

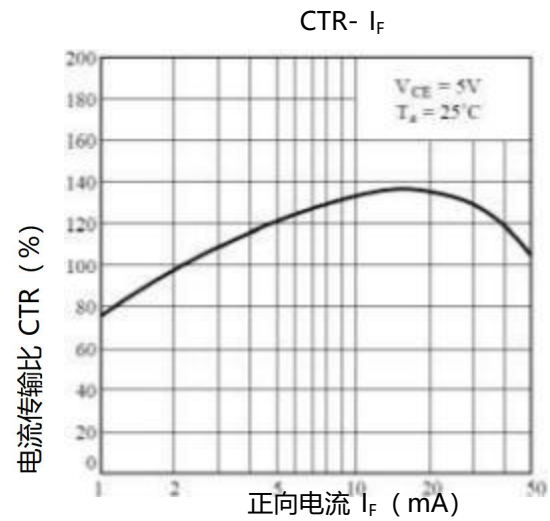
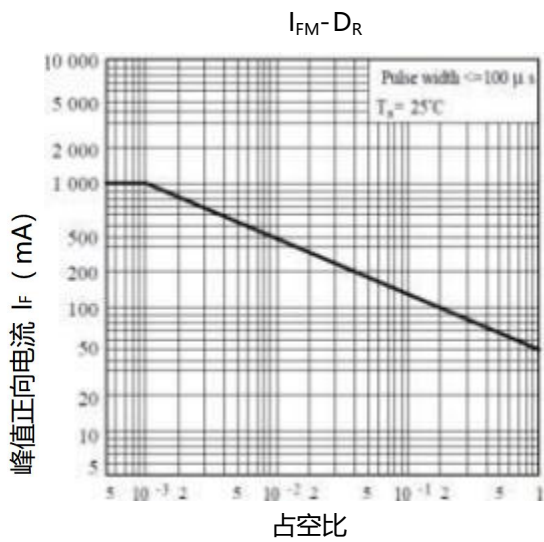
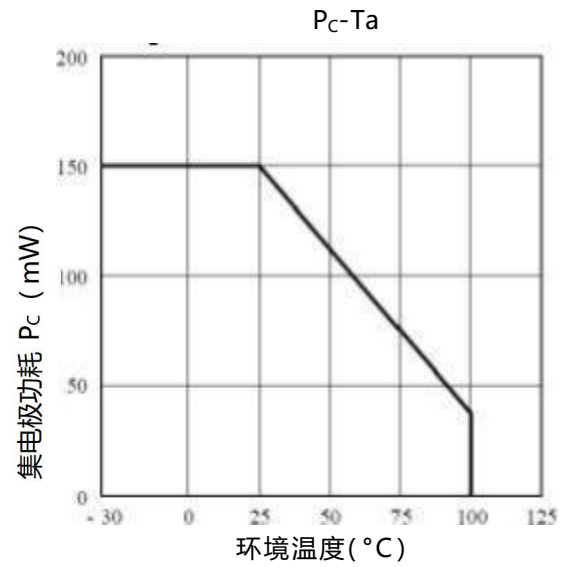
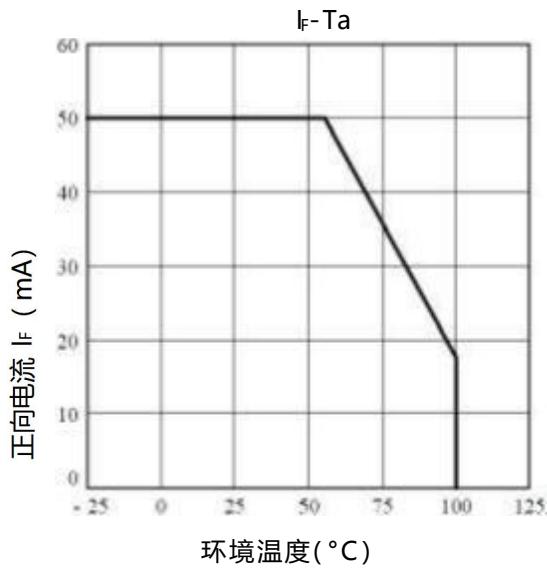
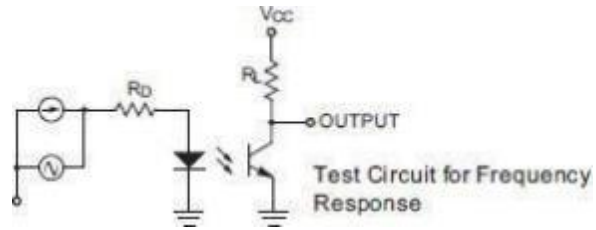
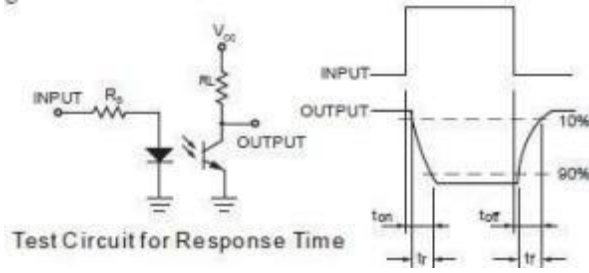
型号	标题标记	分级标准	电流转换率(%) (I _c /I _F)					
			I _F = 5mA, V _{CE} = 5V, Ta = 25℃			I _F = 1mA, V _{CE} = 0.4V, Ta = 25℃		
			Min	Type	Max	Min	Type	Max
MTLP185		Blank	50	—	600			
MTLP185Y		Y	50	—	150			
MTLP185GR		GR	100	—	300	—	60	—
MTLP185GB		GB	100	—	600	30	—	—
MTLP185GBL		GBL	200		220			
MTLP185GRL		GRL	100		200			
MTLP185GRH		GRH	150		300			
MTLP185GBH		GBH	200		400			

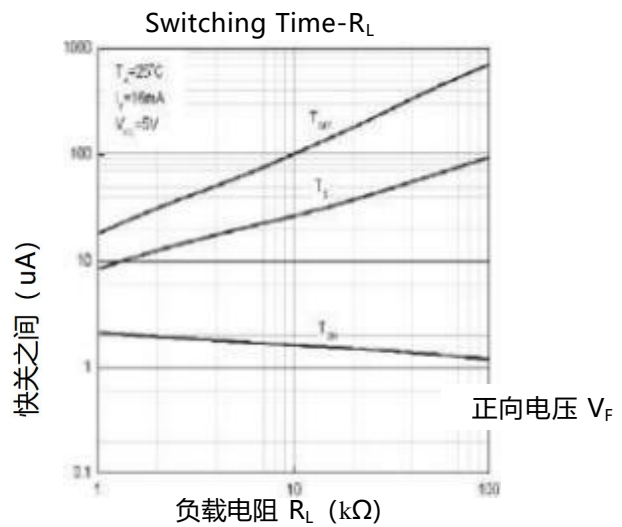
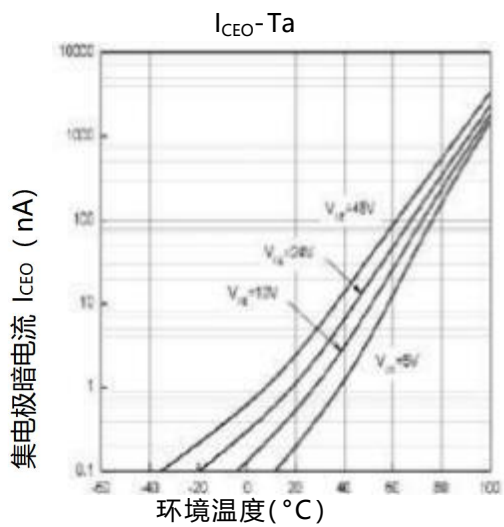
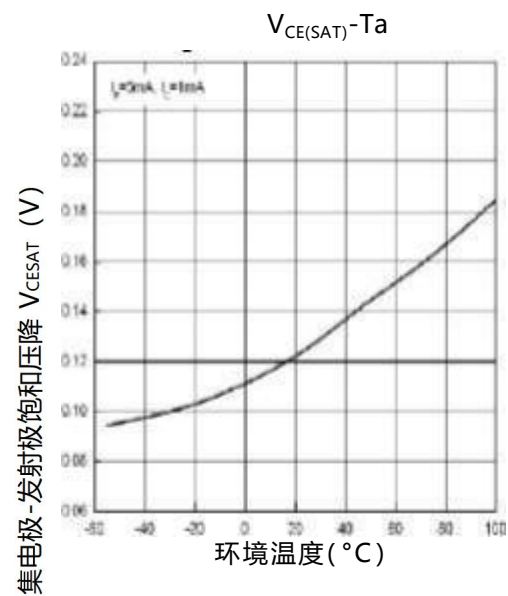
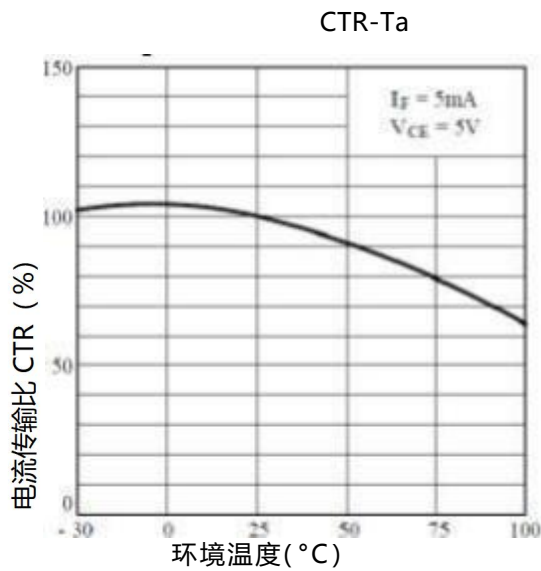
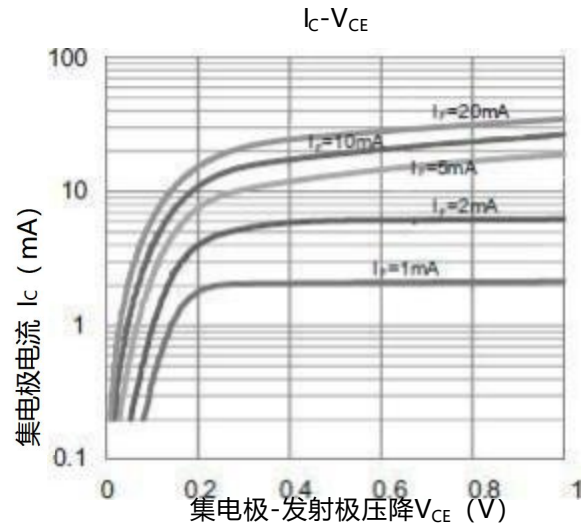
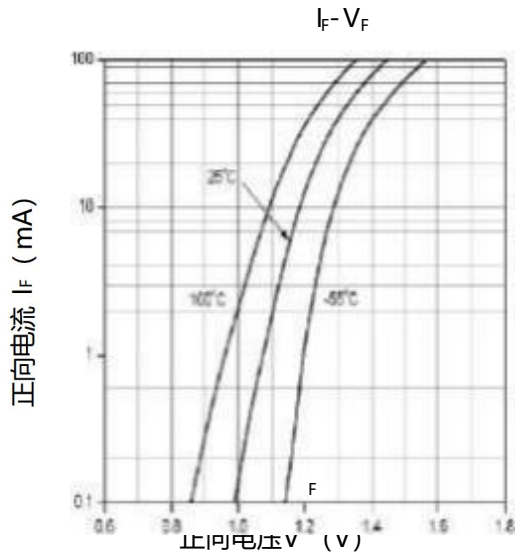
光电特性 (Ta=25℃)

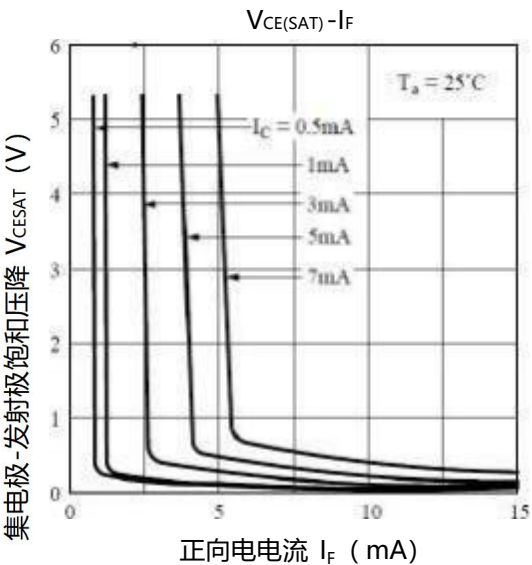
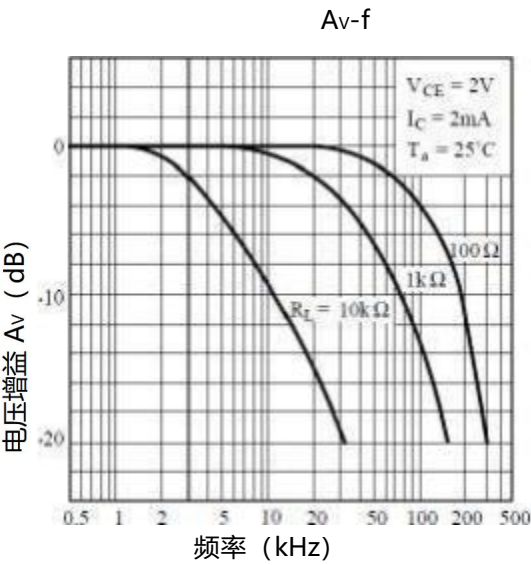
Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit
输入	正向电压	V _F	I _F =20mA		1.2	1.4	V
	反向电流	I _R	V _R =5V	-	-	10	μA
	输入端电容	C _{in}	V=0, f= 1kHz	-	30	250	pF
输出	集电极暗电流	I _{CEO}	V _{CE} =70V	-	-	100	nA
	集电极-发射极击穿电压	BV _{CEO}	I _C =0.1mA, I _F =0	80	-	-	V
	发射极-集电极击穿电压	BV _{ECO}	I _E =0.1mA, I _F =0	7	-	-	V
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	C _f	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	F _c	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%

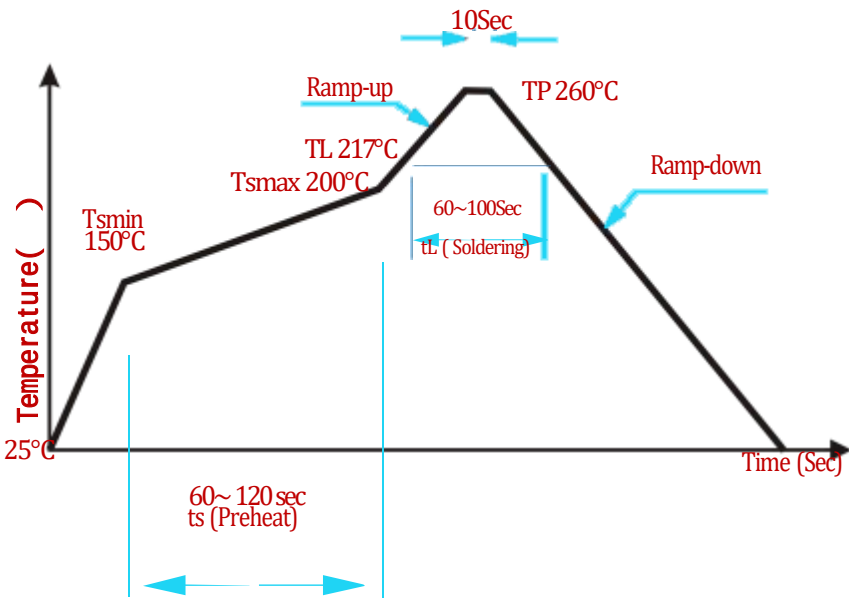
测试电路



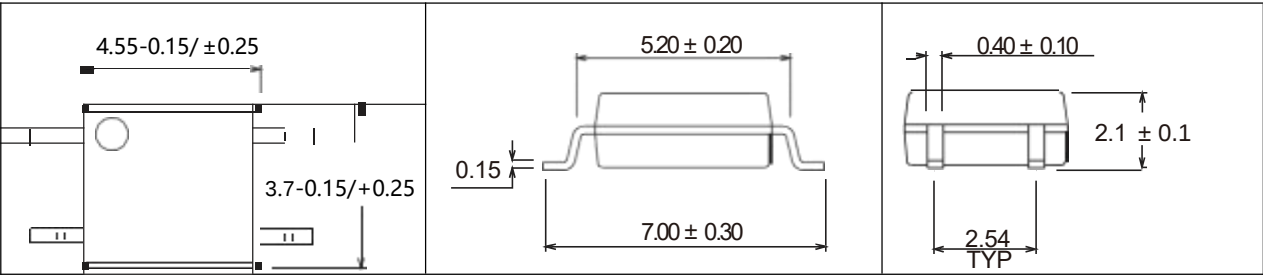




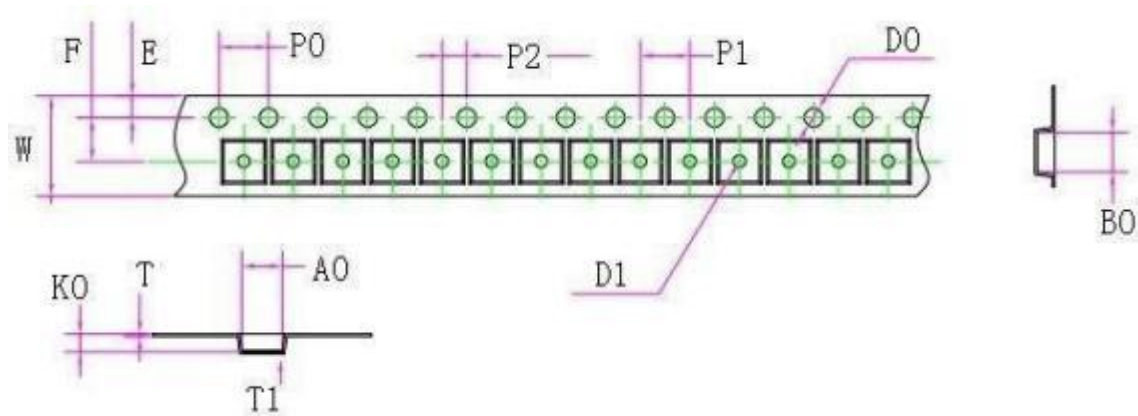
回流焊温度曲线图



外形尺寸



编带尺寸



W	E	F	D0	D1	P0
12.00±0.10	1.75±0.10	5.50±0.05	1.50+0.10/-0	1.50+0.10/-0	4.00±0.10
P1	P2	A0	B0	K0	T
8.00±0.10	2.00±0.10	3.90±0.10	7.38±0.10	2.50±0.10	0.2±0.05
T1	10*P0				
0.10min	40.00±0.20				

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