

816/817 Series 晶片變更說明

EL816/817 Series IR&PT PCN

ECR000084776

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EVERLIGHT

Propose

- 為確保按計畫出貨，億光將導入新款晶片。
- Make sure enhance the lead time, Everlight will implement lead into new 2nd source of IR/PT.
 - ✓ 目的(Propose)
 - ✓ 電性測試(Electrical Test)
 - ✓ 結論 (Conclusion)

電性測試(Electrical Test)

- 測試規格 (Test Spec).

Item	V_F	I_R	I_{CEO}	BV_{CEO}	BV_{ECO}	V_{CES}	CTR	t_r	t_f
Unit	V	μA	nA	V	V	V	%	μs	
Test condition	$I_F=20mA$	$V_R=4V$	$V_{CE}=20V$	$I_C=0.1mA$	$I_E=0.1mA$	$I_F=20mA$ $I_C=1mA$	$I_F=5mA$ $V_{CE}=5V$	$V_{CC}=2V$ $I_C=2mA$ $R_L=100$	
Spec.	≤ 1.4	≤ 10	≤ 100	≥ 80	≥ 7	≤ 0.2	50-600	≤ 18	≤ 18

- 測試結果 (Test Result).

OPTO Tech 2 nd IR + 2 nd PT									
Item	V_F	I_R	I_{CEO}	BV_{CEO}	BV_{ECO}	V_{CES}	CTR	t_r	t_f
Unit	V	μA	nA	V	V	V	%	μs	μs
Group 1	1.238	0	0.0051	120.95	10.342	0.0542	214.04	6.73	9.69
Group 2	1.242	0	0.0070	121.3	10.279	0.0524	231.72	6.66	9.58

OPTO Tech 1 st IR + 1 st PT									
Item	V_F	I_R	I_{CEO}	BV_{CEO}	BV_{ECO}	V_{CES}	CTR	t_r	t_f
Unit	V	μA	μA	V	V	V	%	μs	
Group 1	1.269	0	0.0431	120.69	10.291	0.0597	217.00	4.72	7.42
Group 2	1.278	0	0.0421	121.60	10.282	0.0583	208.28	4.86	7.41

電性測試(Electrical Test)

■ Opto 1st IR+ PT

■ Opto 2nd IR+ PT

Figure 1. Forward Current vs Forward Voltage

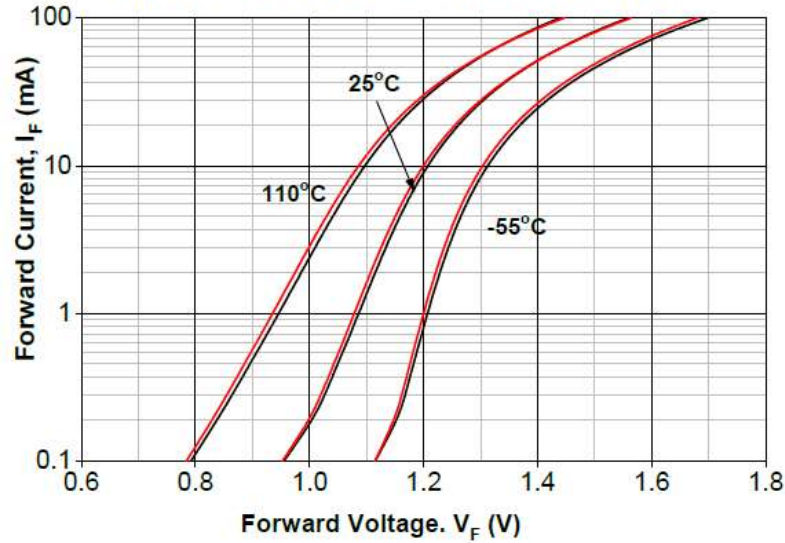


Figure 2. Normalized Current Transfer Ratio vs Forward Current

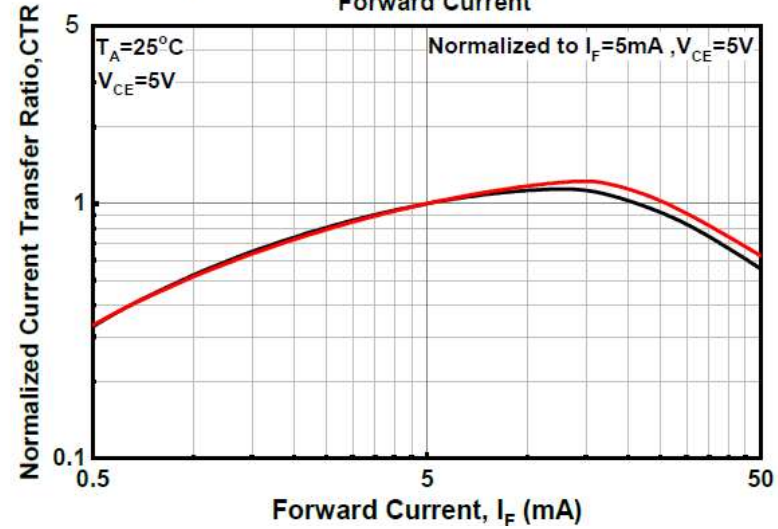


Figure 3. Current Transfer Ratio vs Ambient Temperature

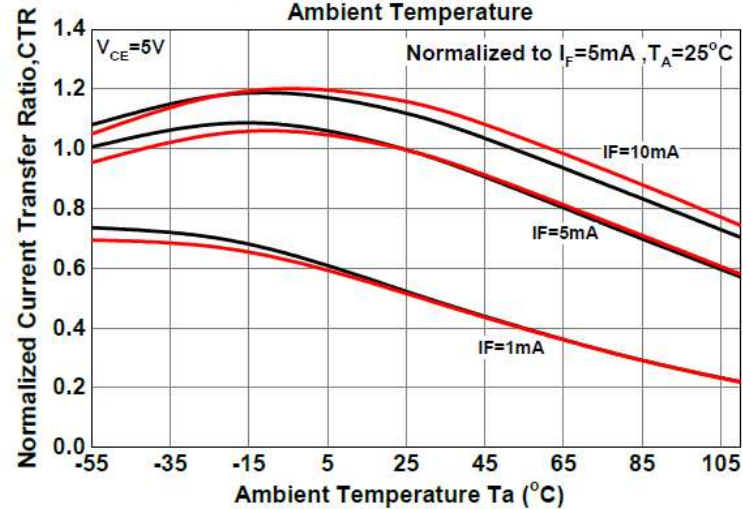
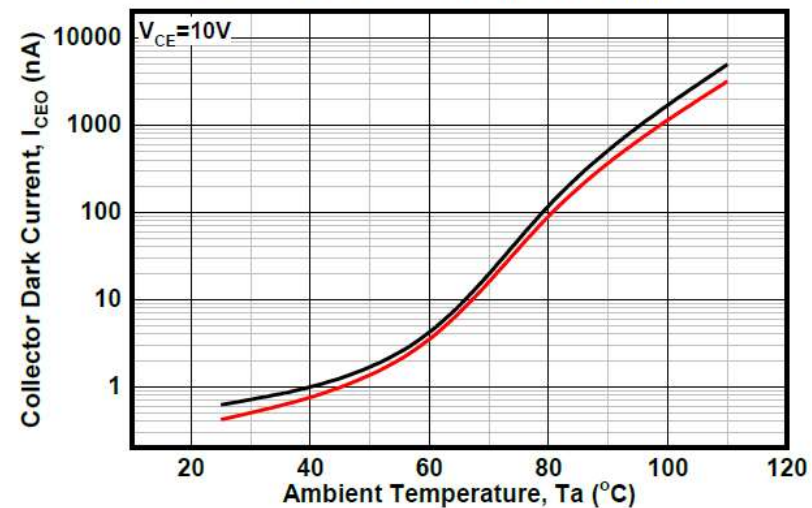


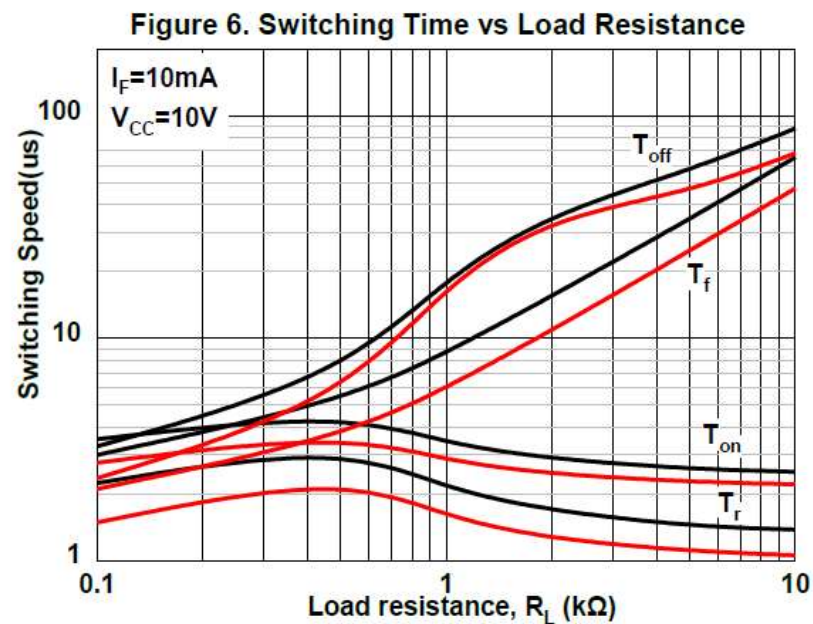
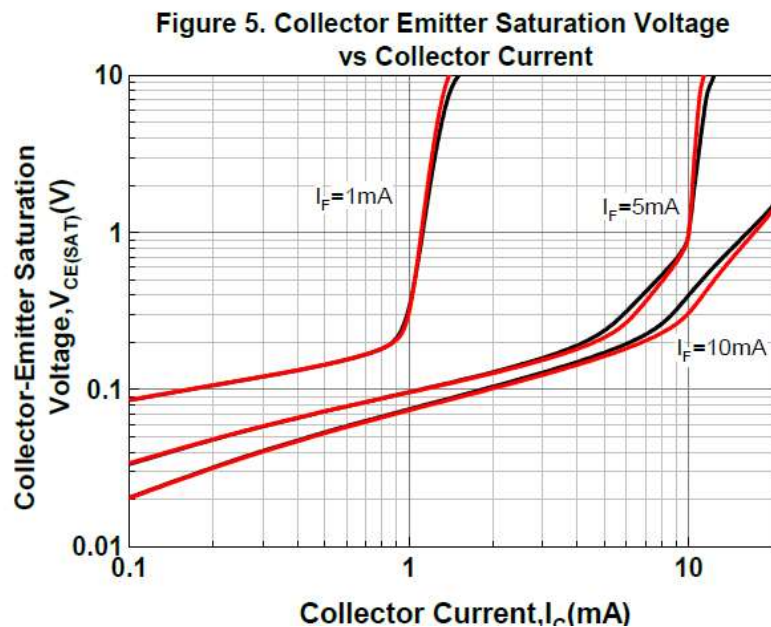
Figure 4. Dark Current vs Ambient Temperature



電性測試(Electrical Test)

■ Opto 1st IR+ PT

■ Opto 2nd IR+ PT



結論(Conclusion)

- 電性差異並不大，可以符合原來規格
- Electrical parameter is similar as original dice combo.

- 電性曲線差異也並不大，與原規格差異並不大
- Electrical Curve is almost the same as original one.