ORIENT

Pho o co pler

Prod c Da a Shee

Par N mber: ORPC-817-(GK)

C omer: _____

Da e: _____

一级代理商：

深圳市弗瑞鑫电子有限公司

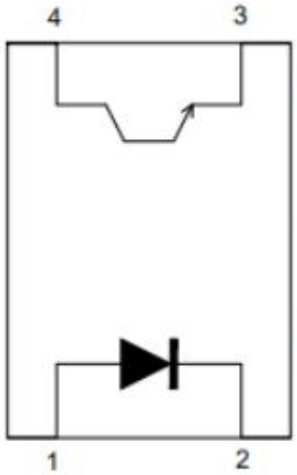
地址：深圳市宝安区西乡大道302号金源商务大厦B座三楼

frxelec

(1) Current transfer ratio (CTR : MIN. 50% at I_F = 5mA, V_{CE} = 5V)
(2) High input-output isolation voltage (V_{iso} = 5,000Vrms)
(3) Response time (tr : TYP. 2.9 at V_{CE} = 2V, I_C = 2mA, R_L = 100)
(4) ESD package HBM 8000V/MM 2000V
(5) Safety approval
UL approved (No.E323844)
VDE approved(No.40029733)
CQC approved (No.CQC09001029446)
CE approved (No.AC/0431008)
Safety Grid approved (No.SGCM013...0170152)
(6) In compliance with RoHS, REACH standards
(7) MSL Class

(1) ORPC-817-(GK) photocoupler consists of one piece of GaAs emitter and one piece of NPN transistor.
(2) Packaged in a 4-pin DIP package and available in lead-lead spacing and SMD option.

(1) Switching power supply
(2) Ammeter
(3) Computer
(4) Instrumental application, measurement machine
(5) Signal transforming system
(6) Imbursement equipment, duplicating machine, automation
(7) Family-use electric equipment, such as fan



pin No. and Internal connection diagram

1 Anode
2 Cathode
3 Emitter
4 Collector

	For ard Vol age	V_F	---	1.2	1.4	V	I_F=20mA
	Re er e C rren	I_R	---	---	5	A	V_R=5V
	Inp Capaci ance	C	---	10	200	pF	V=0, f=1MH
	Dark C rren	I_{CEO}	---	---	100	nA	V_{CE}=20V I_F=0mA
	Collec or and Emi er a en a ion Vol age	BV_{CEO}	80	---	---	V	I_C=0.1mA I_F=0mA
	Emi er and Collec or a en a ion Vol age	BV_{ECO}	7	---	---	V	I_E=0.1mA I_F=0mA
	*1 C rren ran fer ra io	CTR	50	---	600	%	I_F=5mA V_{CE}=5V
	Collec or C rren	I_C	2.5	---	30	mA	I_F=5mA V_{CE}=5V
	Collec or and Emi er Sa ra ion Vol age	$V_{CE(\ a\ )}$	---	0.1	0.2	V	I_F=20mA I_C= 1mA
	I ola ion Impedance	$R_{i\ o}$	5 10^{10}	1 10^{12}	---		DC500V 40 60%R.H.
	Floa ing Capaci ance	C_f	---	0.4	1.0	pF	V=0, f=1MH
	C -off Freq enc	f_c	---	260	---	kH	V_{CE}=5V I_C=2mA R_L=100 , -3dB
	Ri e Time	r	---	2.9	10		V_{CC}=2V I_C=2mA R_L=100
	Fall Time	f	---	4.5	10		
	T rn-on Time	on	---	6.3	10		
	T rn-off Time	off	---	7.1	10		

*1 C rren Con er ion Ra io = I_C / I_F 100% , CTR Tolerance: 3%.

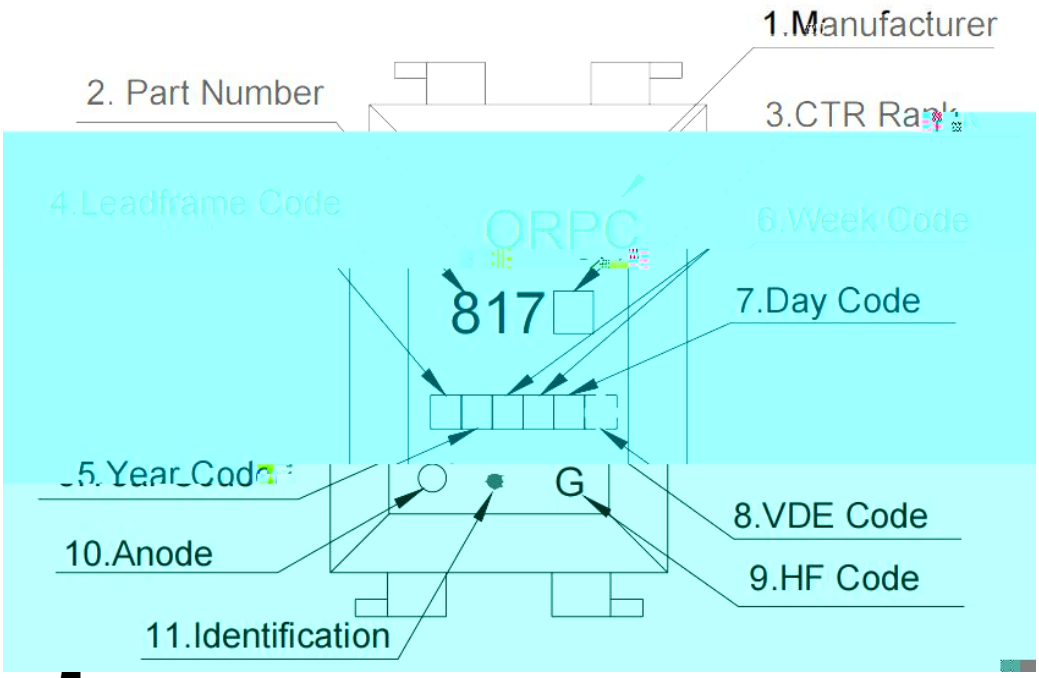
L	50	100	I_F=5mA, V_{CE}=5V, Ta=25	%
A	80	160		
B	130	260		
C	200	400		
D	300	600		

A5	4	20	I_F=0.1mA, V_{CE}=5V, Ta=25	%
B5	6.5	34		
C5	10	52		
D5	15	78		
A6	24	72	I_F=0.5mA, V_{CE}=5V, Ta=25	
B6	40	120		
C6	70	140		
D6	90	270		
A7	40	105	I_F=1mA, V_{CE}=5V, Ta=25	
B7	65	170		
C7	100	260		
D7	150	390		

X = Lead form op ion (S, M or none)

T = CTR Rank (L, A, B, C, D, A5, B5, C5...)

V = Tam B



(1) ORIENT PHOTOCOUPLER.

(2) 817 deno e De ce Par N mber.

(3) ☐ deno e Ran C de.(N mber no mark, L,A,B,C or D onl)

(For e ample C6 mar C onl)

(4) ☐ deno e Lead F me Code.

(5) ☐ deno e Year C de.

(6) ☐☐ deno e Wee Code.

(7) ☐ deno e Da Code.

(8) ☐ deno e VDE ode. (Op ional)

(9) ☐ deno e HF ode. (Copper for HF onl)

(10) Anode.

(11) Iden ifica ion.

* VDE Mark can be elec ed.

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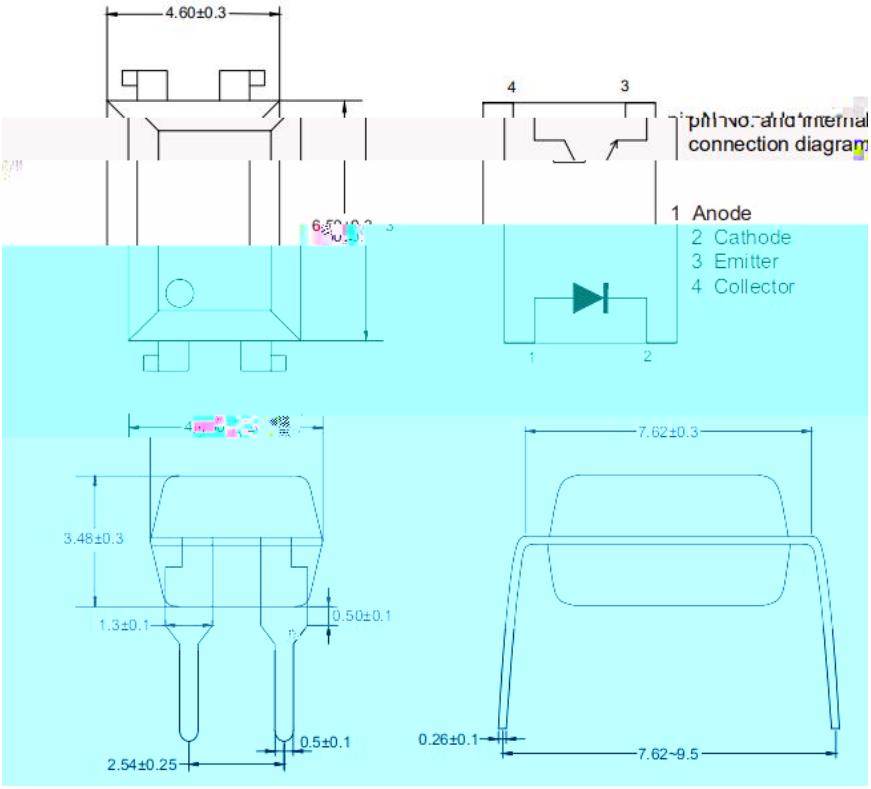
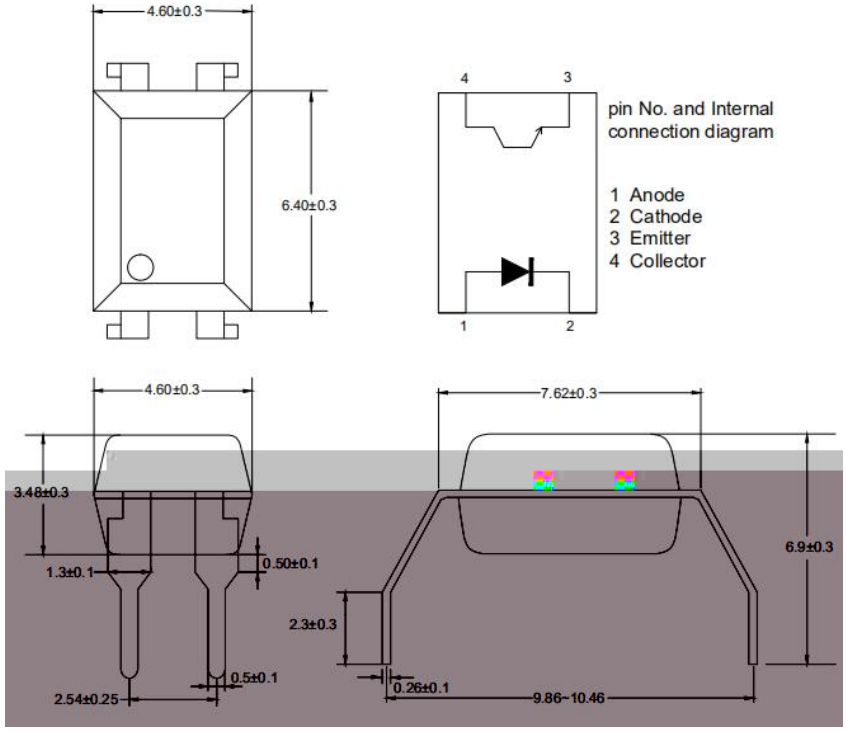
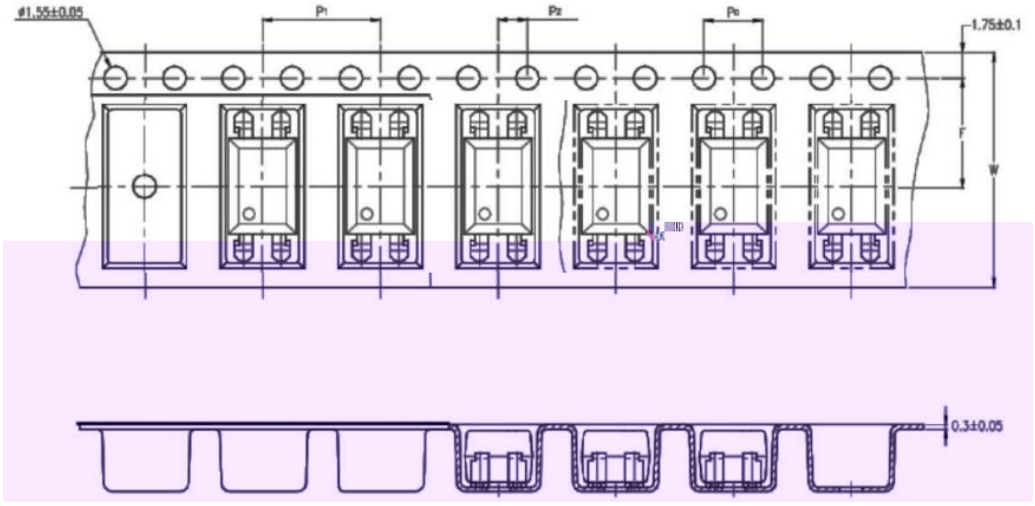

4.60±0.3
4
3
pin No. and Internal
connection diagram
1 Anode
2 Cathode
3 Emitter
4 Collector
1
2
3.48±0.3
1.3±0.1
0.50±0.1
0.5±0.1
2.54±0.25
7.62±0.3
0.26±0.1
7.62~9.5

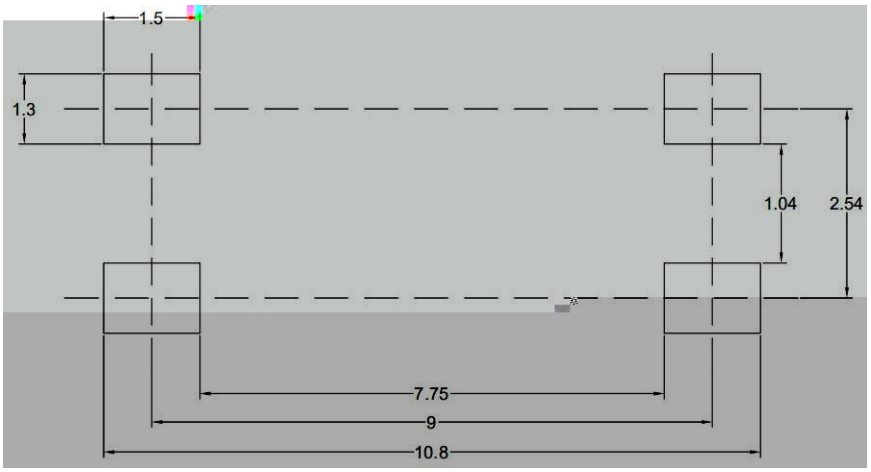

4.60±0.3
6.40±0.3
4
3
pin No. and Internal
connection diagram
1 Anode
2 Cathode
3 Emitter
4 Collector
1
2
4.60±0.3
7.62±0.3
3.48±0.3
1.3±0.1
0.50±0.1
6.9±0.3
2.3±0.3
0.5±0.1
2.54±0.25
0.26±0.1
9.86~10.46



Tape ide	W	16 0.3 (.63)
Pi ch of procke hole	P_0	4 0.1 (.15)
Di ance of compar men	F	7.5 0.1 (.295)
	P2	2 0.1 (.0079)
Di ance of compar men o compar men	P1	8 0.1 (.472)

Package T pe	TP/TP1
Q an i ie (pc)	2000

:)



		Reliabili Te ing				
1	耐焊接热	22	260±5℃	10 /3 次	锡炉	JESD22-A106
2	高温存储	77	125℃	168 hr 500 hr 1000 hr	高温烤箱 测试仪	JESD22-A103
3	低温存储	77	-55℃	168 hr 500 hr 1000 hr	低温箱 测试仪	JESD22-A119
4	温度循环	77	H:125℃ 15min ∫ 5min L:-55℃ 15min	300 c cle	冷热冲击机	JESD22-A104
5	温度冲击	77	H:100℃ 5min ∫ 15 L:-40℃ 5min	300 c cle	冷热冲击机	JESD22-A106
6	高温操作	77	110℃ IF=10mA Vce=5V	168 hr 500 hr 1000 hr	高温烤箱 测试仪、老 化电路板	JESD22-A108
7	人体模式	22	≥8KV 1C cle	1次	ESD静电测 试仪	JESD22-A114
8	可焊性	22	Pb-free 245±5℃	5S/1次	锡炉	JESD22-B102
9	HTRB 高温反向偏压	77	HTRB @125℃ Vce=80	168 hr 500 hr 1000 hr	高温烤箱 ，测试仪	JESD22-A103
10	H3TRB 温湿度反向偏压，寿命试验	77	H3TRB 85℃,85%RH Vce=80	168 hr 500 hr 1000 hr	恒温恒湿 机，测试仪	JESD22-A101
11	Autoclave 压力锅	77	Ta=121 ℃,100%RH,2a m	96hr	压力锅	JESD22-A102

Fig.1 Forward current vs Ambient temperature

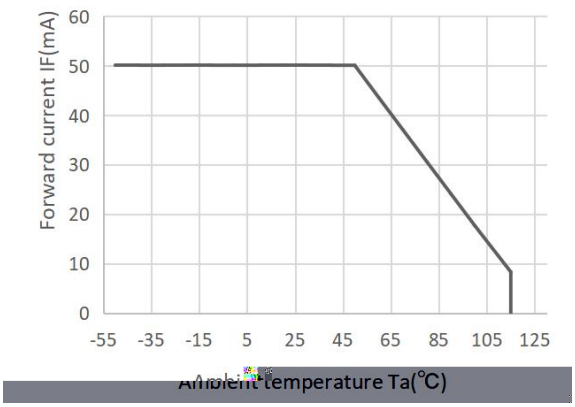


Fig.2

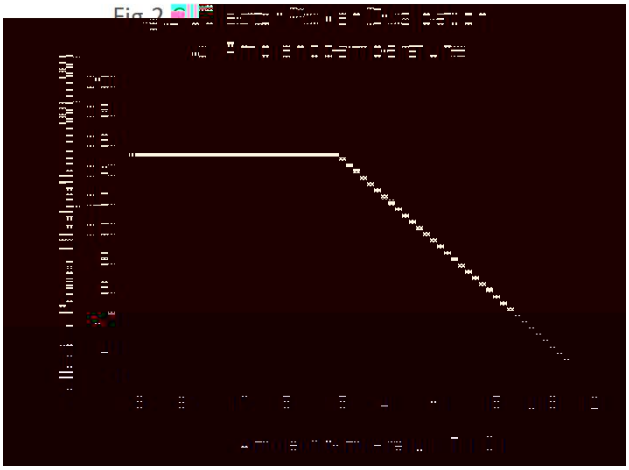


Fig.3 Collector-emitter Saturation Voltage vs. Forward Current

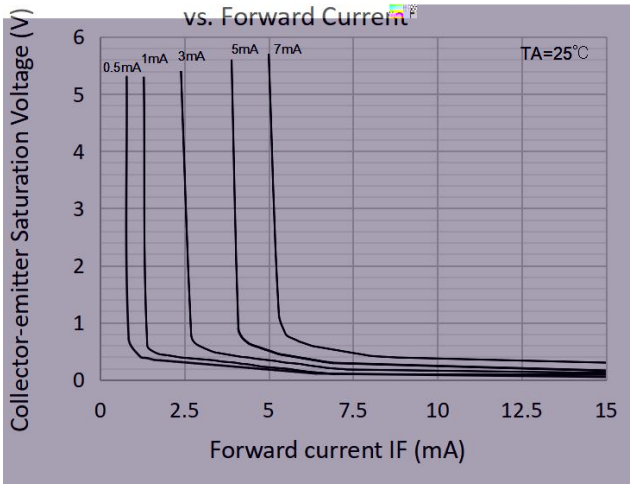


Fig.4 Forward Current vs. Forward Voltage

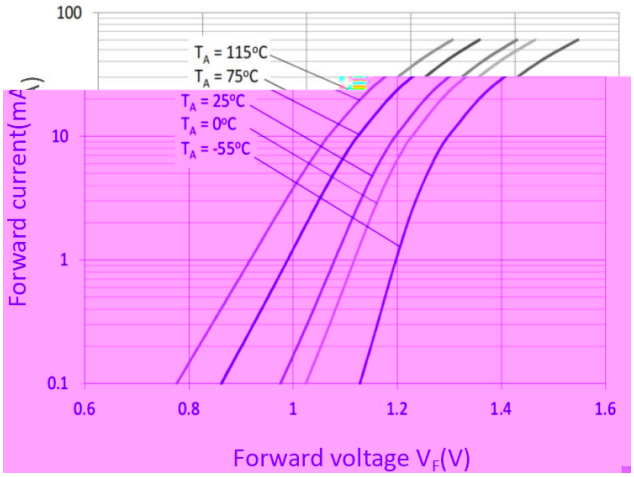


Fig.5 Forward Current vs. Current Transfer Ration

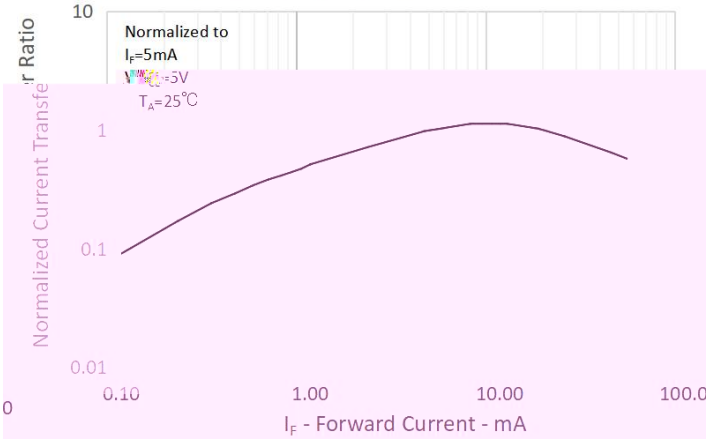


Fig.6 Collector Current vs. Collector-emitter Voltage

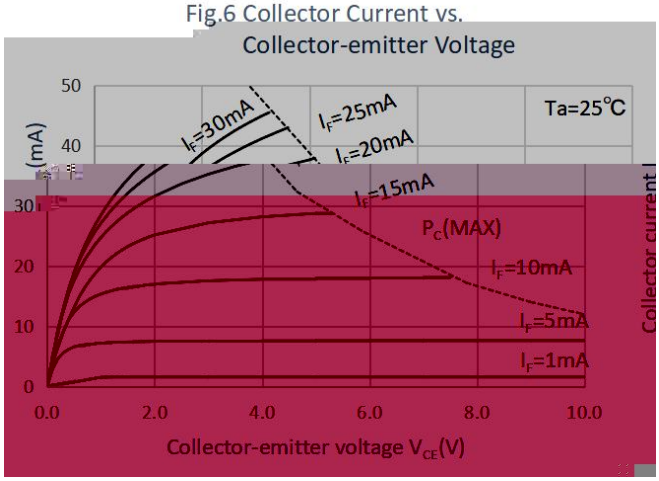


Fig.7 Relative Current Transfer Ratio vs. Ambient Temperature

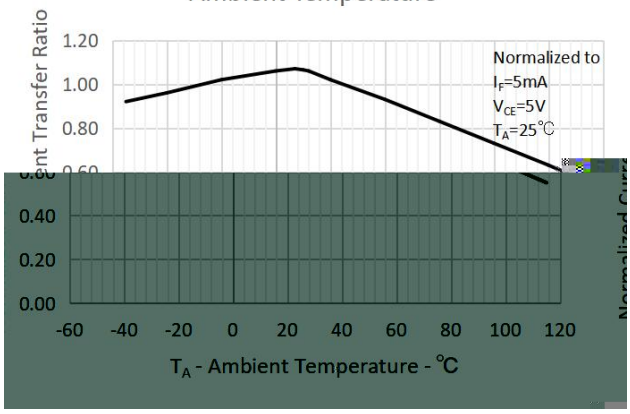


Fig.8 Collector-emitter Saturation Voltage vs. Ambient Temperature

Fig.9 Collector Dark Current vs. Ambient Temperature

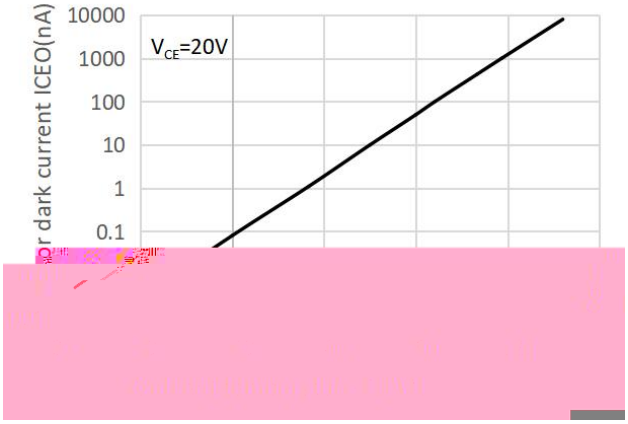


Fig.10 Respinse Time vs. Load Resistance

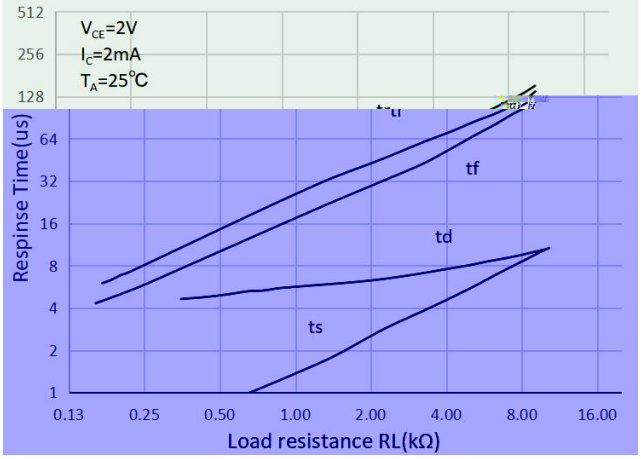
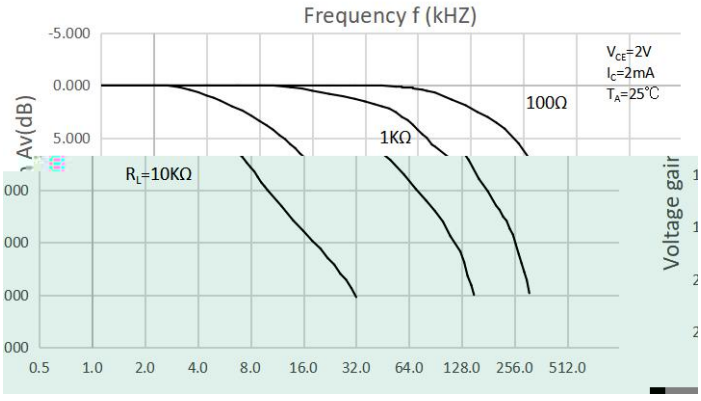
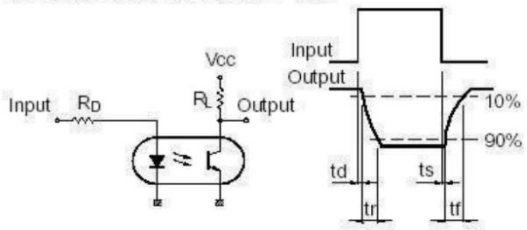


Fig.11 Frequency Response



Test Circuit for Response Time



Test Circuit for Frequency Response