

Optoisolators

Phototransistors		Total Device Ratings			LED Max Ratings		Phototransistor Ratings				Ckt. Diag.	Fig. No.
ECG Type	Output Configuration	Isolation Voltage Viso Surge (V)	Total Power P _t (mW)	DC Current Transfer Ratio % *	Forward Current I _F (mA)	Reverse Voltage V _R (V)	Collector to Base Voltage BV _{CB0} (V)	Collector to Emitter Voltage BV _{CEO} (V)	Collector Current I _c (mA)	Typ Freq KHz		
ECG3040	NPN Transistor	7500	250	20	80	3	70	30	3.5 Typ	300	A	P28
ECG3041	NPN Transistor	7500	250	100	60	6	70	30	100 Max	150	A	
ECG3042	NPN Transistor	7500	250	20	60	3	70	30	50 Max	150	A	
ECG3043	NPN Transistor	3550	260	70	60	3	70	80	50 Max	100	A	
ECG3044	NPN Darlington	7500	300	300	80	3	--	80	150 Max	75	B	
ECG3045	NPN Darlington	7500	300	500	80	3	--	80	150 Max	75	B	
ECG3081	NPN Transistor	6000	250	20	60	3	--	30	100	100	D	P27
ECG3082	NPN Darlington	6000	250	400	60	3	--	30	100	75	C	
ECG3083	NPN Darlington	7500	250	100	60	3	55	55	100	75	E	P28
ECG3084	NPN Darlington	7500	250	200	60	3	30	30	100	75	E	
ECG3086	NPN Dual Transistor	7500	400	50	60	3	---	30	30	200	F	P29
ECG3220	NPN Dual Transistor	5000	150	100	50	5	---	55	50	---	V	
ECG3088	NPN Transistor	7500	300	20	60	6	300	300 (BV _{CER})	100	200	A	P28
ECG3089	NPN Transistor	7500	300	20	60	--	70	30	100	200	M	
ECG3096	Low Input Drive NPN Transistor	7500	300	50 @ I _F 1 mA	60	6.0	70	30	100	200	A	
ECG3098	NPN Transistor	5000	250	100	60	5	---	55	50	---	S	P55
ECG3221	NPN Quad Transistor	5000	150	100	50	5	---	55	50	---	W	P61

* DC Current Transfer Ratio is the output transistor collector current divided by the LED forward current - $hFE = I_C / I_F$

Photothyristors		Total Device Ratings		LED Max Ratings		Photothyristor Ratings					Ckt. Diag.	Fig. No.
ECG Type	Output Configuration	Isolation Voltage Viso Surge (V)	Power P _t (mW)	Forward Current I _F (mA)	Reverse Voltage V _R (V)	V _{DRM} (V)	I _T RMS (mA)	I _{FT} (mA)	V _F (on) 100 mA (V)	I _{HOLD} (mA)		
ECG3046	SCR	3550	260	60	3	400	100	14	1.3	.5	G	P28
ECG3047	TRIAC	7500	330	50	3	250	100	10	3.0	.1	H	
ECG3048	TRIAC	7500	330	50	3	400	100	10	3.0	.1	H	
ECG3049	TRIAC with Zero Crossing Circuit	7500	330	50	3	250	100	15	3.0	.1	J	
ECG3091	SCR	4000	400	60	6	400	300	11	1.3 at 300 mA	.5	G	
ECG3097	TRIAC with Zero Crossing Circuit	7500	300	50	6	400	100	15	3.0	.2	J	

Photo FET		Total Device Ratings		LED Max Ratings		Photo FET Ratings					Ckt. Diag.	Fig. No.
ECG Type	Output Configuration	Isolation Voltage Viso Surge (V)	Power P _t (mW)	Forward Current I _F (mA)	Reverse Voltage V _R (V)	Drain to Source Breakdown Voltage BV _{DSS} (V)	Drain Current I _D (mA)	R _{DSon} (Ohms)	T _{on} (μsec)	T _{off} (μsec)		
ECG3085	FET	2500	300	60	6	± 30	± 100	200	15	15	K	P28

TTL Compatible Photo Coupled Logic Gates		Total Device Ratings		LED Ratings		Output Ratings				Ckt. Diag.	Fig. No.
ECG Type	Output Configuration	Isolation Voltage Viso (V)	Power P _t (mW)	Forward Current I _F (mA)	Reverse Voltage V _R (V)	Max Supply Voltage V _{CC} (V)	Output Current I _O (mA)	Propagation Delay Time (nsecs)	Enable Voltage V _E (V)		
ECG3087	Hi Speed Open Collector, NAND Gate	3000	100	10	5.0	5.0	50	75	5.0	L	P29
ECG3094	Dual Hi Speed Open Collector, NAND Gates	3000	60	15	5.0	5.0	16 Per Channel	75	--	Q	

Optoisolators (cont'd)

TTL Compatible Phototransistors		Device Ratings		LED Max Ratings		Output Ratings					Ckt. Diag.	Fig. No.
ECG Type	Output Configuration	Isolation Voltage V _{iso} (V)	Power P _t (mW)	Forward Current I _F (mA)	Reverse Voltage V _R (V)	Max V _{CC} (V)	Current Transfer Ratio % *	Output Current I _O (mA)	Propagation Delay Time (nsec)	Data Transfer Rate Mbit/sec		
ECG3092	Open Collector NPN Transistor	3000	100	25	5	15	15	8	800	1	O	P29
ECG3093	NPN Split Darlington	3000	100	20	5	18	400	60	t _{PHL} 1 μsec t _{PLH} 7 μsec	100K	P	
ECG3095	Dual Open Collector, NPN Transistors	3000	100	25	5	15	15	8	800	1	R	

* DC Current Transfer Ratio is the output transistor collector current divided by the LED forward current - $h_{FE} = I_C / I_F$

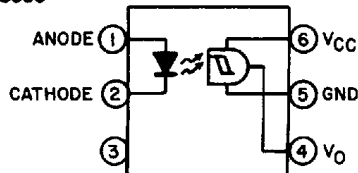
ECG Type	Output Configuration	Total Device Ratings		Led Max Ratings		Output Ratings					Ckt. Diag.	Fig. No.
		Isolation Voltage V _{iso} Surge (V)	Power P _t (mW)	Forward Current I _F (mA)	Reverse Voltage V _R (V)	V _{CC} Voltage Range (V)	Output Voltage V _O (V)	Output Current I _O (mA)	Turn-On Time T _{on} (μsec)	Turn-Off Time T _{off} (μsec)		
ECG3090	Schmitt Trigger	7500	150	60	6	3V to 15V	15 max	50 max	1.2 typ	1.2 typ	N	P28

Optoisolator Circuits

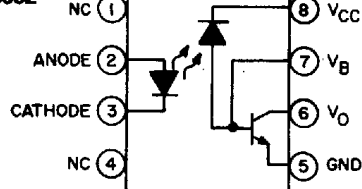
Diag. A ECG 3040 3041 3042 3043 3088 3096 Fig. P28	Diag. B ECG 3044 3045 Fig. P28	Diag. C ECG3082 Fig. P27
Diag. D ECG3081 Fig. P27	Diag. E ECG 3083 3084 Fig. P28	Diag. F ECG3086 Fig. P29
Diag. G ECG 3046 3091 Fig. P28	Diag. H ECG 3047 3048 Fig. P28	Diag. J ECG 3049 3097 Fig. P28
Diag. K ECG3085 Fig. P28	Diag. L ECG3087 Fig. P29	Diag. M ECG3089 Fig. P28

Optoisolator Circuits (cont'd)

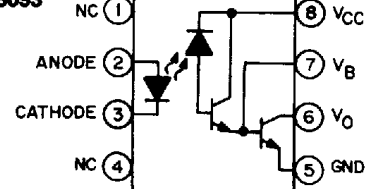
Diag. N
ECG3090 Fig. P28



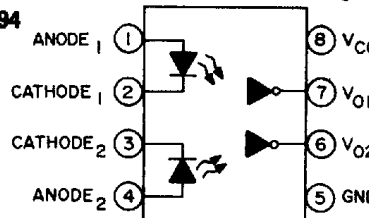
Diag. O
ECG3092 Fig. P29



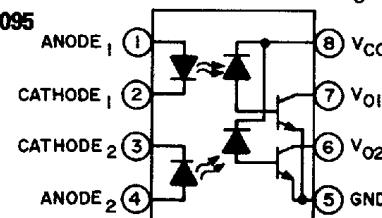
Diag. P
ECG3093 Fig. P29



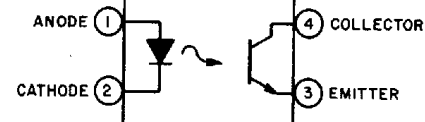
Diag. Q
ECG3094 Fig. P29



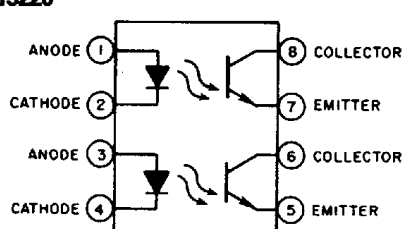
Diag. R
ECG3095 Fig. P29



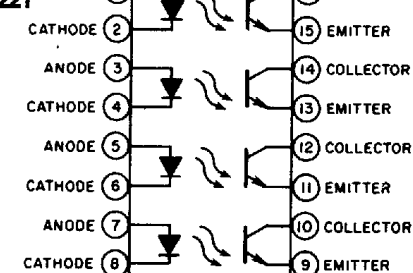
Diag. S
ECG3098 Fig. P55



Diag. V
ECG3220 Fig. P29



Diag. W
ECG3221 Fig. P61



Optoisolator Outlines

Fig. P27

ECG
3081
3082

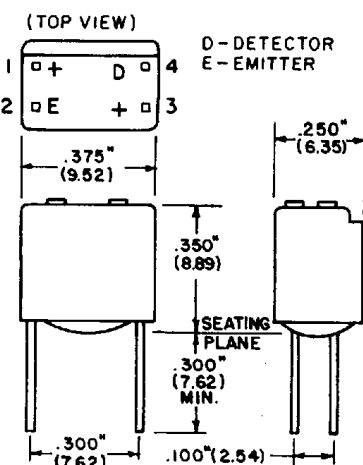


Fig. P28

ECG

3040 3096
3041 3097
3042
3043
3044
3045
3046
3047
3048
3049
3083
3084
3085
3088
3089
3090
3091

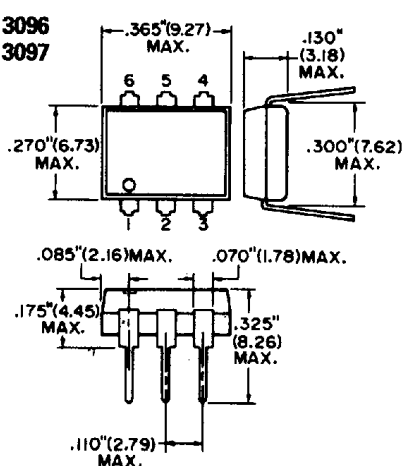


Fig. P29

ECG

3086 3092 3094 3220
3087 3093 3095

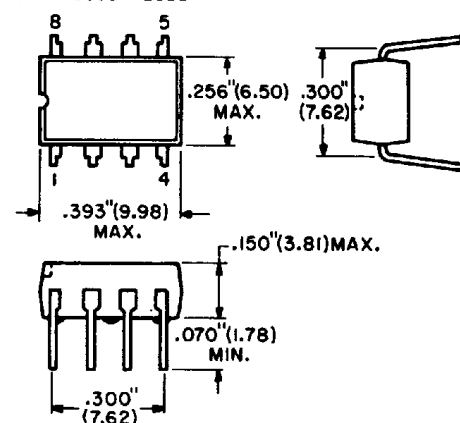


Fig. P55

ECG
3098

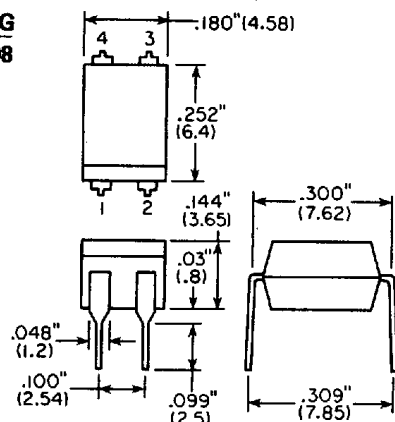


Fig. P61

ECG
3221

