



宜技科技有限公司

IC-HI TECHNOLOGY CO., LTD.

OPTO MOSFET OUTPUT PHOTO-RELAY SELECTION GUIDE



光電繼電器選購指南

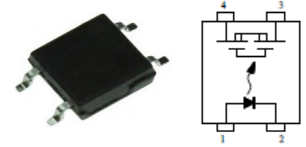
SINCE 1993

APPLICATIONS

- 蓄電系統 (充放電力, 絕緣檢測, 電池監控)
- 智慧電錶 (主要繼電器驅動, 數據通信設備)
- 自動檢針 (測量儀器, 醫療儀器)
- 工業控制 (工廠自動化, 工業電腦, OA設備)
- 一般應用 (掃描器應用, 防範/防災機具, 通信設備)

SOP 4

Isolation V: 1500 VAC

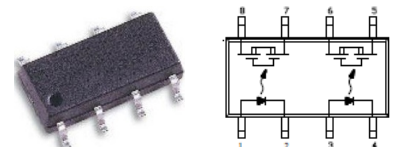


ichitech	Contact	Load Voltage (V)	Load Current (mA)	On Resistance (Typ. Ω)	Capacitance (Typ. pF)	Leakage Current (Max. nA)	Turn-On / Off Time (ms)
HY311GS	1a	20	1700	0.5	500	500	1.5 / 0.1
HY311DGS	1a	20 (DC Only)	5000	0.2	500	500	0.5 / 0.03
HY311G2S	1a	40	2500	0.06	150	500	0.8 / 0.02
HY311DG2S	1a	40 (DC Only)	3500	0.05	240	100	0.4 / 0.03
HY312FS	1a	60	120	5	25	500	0.05 / 0.03
HY312ES	1a	60	200	2	12	500	0.15 / 0.05
HY322RS	1a	60	500	0.8 (Low C*R)	28	10	0.25 / 0.02
HY312S	1a	60	500	0.8	28	500	0.35 / 0.1
HY312GS	1a	60	800	0.3	115	500	1.0 / 0.6
HY312G2S	1a	60	1300	0.13	115	500	1.0 / 0.6
HY352GS	1a	60	2500	0.06	150	500	1.5 / 0.1
*HT312EHTS	1a	60	200	2	12	500	0.15 / 0.05
*HY312HTS	1a	60	350	0.13	115	500	1.0 / 0.6
HY325NS	1a	80	80	35	3 (Low C*R)	10	0.03 / 0.05
HY315GS	1a	100	400	2	22	500	0.3 / 0.05
HY315G2S	1a	100	1250	0.13	115	500	1.0 / 0.06
HY317S	1a	200	180	5	115	500	0.4 / 0.05
HY313S	1a	250	150	9	45	500	0.3 / 0.1
HY310S	1a	350	120	17	41	500	0.23 / 0.05
HY310GS	1a	350	250	12	150	500	0.6 / 0.03
HY314S	1a	400	100	20	45	500	0.23 / 0.03
HY316S	1a	600	80	35	115	500	0.3 / 0.02
HY512S	1b	60	500	0.8	165	1000	0.5 / 0.25
HY514S	1b	400	120	20	165	10000	0.5 / 0.02

* = Operating Temperature 105°C

SOP 8

Isolation V: 1500 VAC



ichitech	Contact	Load Voltage (V)	Load Current (mA)	On Resistance (Typ. Ω)	Capacitance (Typ. pF)	Leakage Current (Max. nA)	Turn-On / Off Time (ms)
HW311G2S	2a	40	2500	0.06	150	100	0.8 / 0.02
HW312GS	2a	60	800	0.3	115	1000	1.0 / 0.6
HW312G2S	2a	60	1100	0.13	115	1000	1.0 / 0.6
HW322RS	2a	60	400	0.8 (Low C*R)	28	10	0.25 / 0.02
HW315G2S	2a	100	1100	0.13	115	1000	1.0 / 0.06
HW317S	2a	200	180	5	115	1000	0.4 / 0.05
HW310FS	2a	350	120	17	41	10	0.06 / 0.05
HW314S	2a	400	100	20	45	1000	0.23 / 0.03
HW316S	2a	600	80	35	115	1000	0.3 / 0.02
HW512S	2b	60	400	0.8	165	1000	0.5 / 0.25
HW514S	2b	400	120	20	165	10000	0.5 / 0.02
HW712S	1a + 1b	60	400	NO: 1 ; NC: 1	165	10000	NO: 0.23 / 0.03 NC: 0.02 / 0.5
HW714S	1a + 1b	400	120	20	165	10000	NO: 0.23 / 0.03 NC: 0.02 / 0.5

SMD / DIP 6

Isolation V: 3750 VAC



ichitech	Contact	Load Voltage (V)	Load Current (mA)	On Resistance (Typ. Ω)	Capacitance (Typ. pF)	Leakage Current (Max. nA)	Turn-On / Off Time (ms)
HV311G2(A)	1a	40	2000	0.06	190	1000	0.8 / 0.02
HV311G3(A)	1a	40	3500	0.043	690	1000	1.5 / 0.05
HV311G4(A)	1a	40	4500	0.033	690	1000	5.0 / 2.0
*HV312HT	1a	60	500	0.17	300	10000	1.2 / 0.05
HV352G(A)	1a	60	2500	0.1	165	1000	2.0 / .01
HV315G2(A)	1a	100	2000	0.15	115	1000	1.0 / 0.35
HV314(A)	1a	400	120	20	110	1000	0.23 / 0.05
HV316(A)	1a	600	80	35	100	1000	0.5 / 0.02
HV358(A)	1a	1500	20	380	35	10000	0.1 / 0.06
HV512(A)	1b	60	500	1	165	1000	0.2 / 0.5
HV514(A)	1b	400	120	20	165	10000	0.02 / 0.5

* = Operating Temperature 105°C

SMD / DIP 8

Isolation V: 3750 VAC



ichitech	Contact	Load Voltage (V)	Load Current (mA)	On Resistance (Typ. Ω)	Capacitance (Typ. pF)	Leakage Current (Max. nA)	Turn-On / Off Time (ms)
HW311G2(A)	2a	40	2500	0.06	190	1000	0.8 / 0.02
HW312G2(A)	2a	60	1100	0.27	115	1000	1.5 / 0.05
HW315(A)	2a	100	400	2	22	1000	0.3 / 0.05
HW314(A)	2a	400	130	20	110	1000	0.23 / 0.03
HW316(A)	2a	600	80	35	100	1000	0.5 / 0.02
HW512(A)	2b	60	400	1	165	1000	0.5 / 0.25
HW514(A)	2b	400	120	20	165	10000	0.02 / 0.5
HW712(A)	1a + 1b	60	400	NO: 1 ; NC: 6	150	10000	NO:0.23 / 0.03 NC:0.2 / 0.5
HW714(A)	1a + 1b	400	120	NO: 20 ; NC: 20	150	NO: 1000 ; NC: 10000	NO:0.23 / 0.03 NC:0.2 / 0.5

H

Y

3

1

1

G

S

Y : 1-CH (4pin)
V : 1-CH (6pin)
W : 2-CH (8pin)

"3"
1FormA(AC/DC)
2FormA(AC/DC)
"5"
1FormB(AC/DC)
2FormB(AC/DC)
"7"
1FormA & 1FormB
(AC/DC)

1: General type
2: RF type (New)

0: 350V
1: 20 to 40V
2: 50 to 60V
3: 250V
4: 400V
5: 80V to 100V
6: 600V
7: 200V
9: 1000V

Blank: Standard
DG: DC only
E: Economical
G: Highcapacity
N: Low C
R: Low R
HT: OT +105°C
F: Fast switch

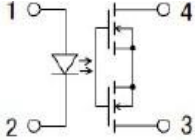
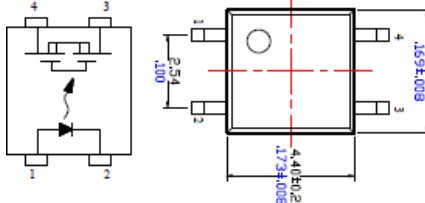
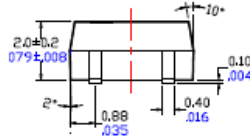
Blank: DIP (through hole)
A: SMD (Surface mount)
S: SOP
V: SSOP (New)

CROSS REFERENCE 產品對照

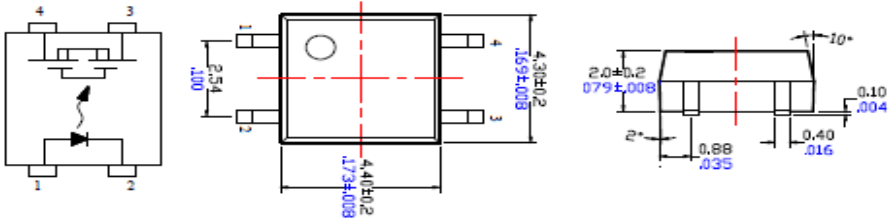
	Panasonic	TOSHIBA	OMRON	IXYS/ CP Clare	OKITA	SSO	VISHAY	COSMO
HY311G2S	AQY211G2S	TLP3123	G3VM-41GR6	CPC1020N	AB26S			
HY311DG2S								
HY312ES		TLP3111	G3VM-61VY1	CPC1017N/ CPC1117NTR	AB45S	M271/M272	VO1400AEF	
HY322RS	AQY222R1S							
HY312S	AQY212S	TLP172A	G3VM-61G1	CPC1014N	AB37S	M261		KAQY212S
HY312GS	AQY212GS			CPC1019N/ CPC1002NTR		M251		
HY312G2S	AQY212G2S	TLP3122		CPC1020NTR		M281		
HY325NS			G3VM-81G1		AB46S			
HY315GS					AB48S			
HY315G2S					AB47S			
HY317S		TLP179D	G3VM-S5		AB34S	M241		KAQY217S
HY310S	AQY210S	TLP174G	G3VM-351G	CPC1030N	AB31S	M221	LH1546AEF	KAQY210S
HY310GS						M231		KAQY213S
HY314S	AQY214S/ AQY284	TLP174GA	G3VM-401G	CPC1025N/ CPC1225N	AB30S	M211	VOR1142M4	KAQY214S
HY316S		TLP170J			AB38S			KAQY216S
HY512S	AQY412S			CPC1117N	AG70S	M272		KAQY416S
HY514S	AQY414S	TLP4176G	G3VM-353G	CPC1125N	AG74S,AG71S	M212		KAQY414S
HW311G2S					AC26S			
HW317S	AQW223R2S	TLP200D			AC34S			KAQW217S
HW314S	AQW214S	TLP206GA		CPC2025N	AC30S			KAQW214S
HW316S	AQW216							KAQW216S
HW512S								
HW514S								
HW712S	AQW612S		G3VM-63G	CPC2317N	AK70S			KAQW612S
HW714S	AQW610S	TLP4026G	G3VM-355JR	CPC2230N	AK74S,AK71S			KAQW614S

ROAD MAP

[illegible]

BRAND		TPM	IC-HI	IC-HI	IC-HI	
Part / No.		S703S	HY311G2S	HY312S	HY312GS	
Photographs						
回路接續圖 Figure.(TOP VIEW)			 			
Output Type		1 Form A	1 Form A	1 Form A	1 Form A	
Package		SOP 4	SOP 4	SOP 4	SOP 4	
Size (L xW xH) mm		4.4 x 4.7 x 2.0	4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0	
Break Down Voltage	V _L	30 V	40V	60V	60V	
Continuous Load Current	I _L	1100 mA	2500 mA	500 mA	800 mA	
Pulse Load Current	I _{Peak}	2000 mA	4.0 A	1.5 A	4.0 A	
Total power Dissipation	P _T	350 mW	500 mW	500 mW	450 mW	
Isolation Voltage	V _{Iso}	1,500 VAC	1,500 VAC	1,500 VAC	1,500 VAC	
ELECTRICAL CHARACTERISTICS						
Input	LED operate current	I _{Fon}	5.0 mA / min	5.0 mA / min	5.0 mA / min	5.0 mA / min
	LED turn off current	I _{Foff}	0.2 mA / max	0.35 mA / Typ.	0.35 mA / Typ.	0.35 mA / Typ.
	LED dropout voltage	V _F	1.4 V / max @ IF= 10 mA	1.2 V / Typ. @ IF= 10 mA	1.2 V / Typ. @ IF= 10 mA	1.2 V / Typ. @ IF= 10 mA
Output	On resistance	R _{on}	0.25 Ω / Typ.	0.06 Ω / Typ.	0.8 Ω / Typ.	0.3 Ω / Typ.
	Output Capacitance	C _{out}	150 pF / Typ.	190 pF / Typ.	28 pF / Typ.	115 pF / max.
	Off state leakage current	I _{Leak}	0.1 uA / max.	0.1 uA / max.	0.5 uA / max.	0.5 uA / max.
Transfer Characteristics	Turn-on Time	T _{on}	0.2 mS / Typ.	0.8 mS / Typ.	0.35 mS / Typ.	1.0 mS / Typ.
	Turn-off Time	T _{off}	0.05 mS / Typ.	0.02 mS / Typ.	0.2 mS / Typ.	0.6 mS / Typ.
	I/O capacitance	C _{Iso}	1 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.
	Initial I/O isolation resistance	R _{Iso}	10 ¹⁰ Ω / min	10 ¹⁰ Ω / min	10 ¹⁰ Ω / min	10 ¹⁰ Ω / min

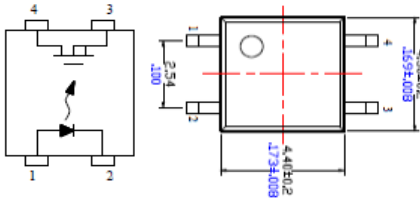
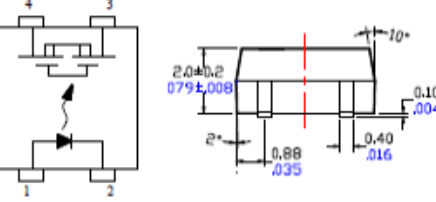
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BRAND		IC-HI	IC-HI	IC-HI	IC-HI
Part / No.		HY312G2S	HY315G2S	HY317S	HY310S
Photographs					
回路接續圖 Figure.(TOP VIEW)					
Output Type		1 Form A	1 Form A	1 Form A	1 Form A
Package		SOP 4	SOP 4	SOP 4	SOP 4
Size (L xW xH) mm		4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0
Break Down Voltage	V_L	60V	100V	200V	350V
Continuous Load Current	I_L	1300 mA	1250 mA	180 mA	120 mA
Pulse Load Current	I_{Peak}	4.0 A	3.0 A	1.0 A	0.6 A
Total power Dissipation		400 mW	400 mW	500 mW	350 mW
Isolation Voltage	V_{Iso}	1,500 VAC	1,500 VAC	1,500 VAC	1,500 VAC
ELECTRICAL CHARACTERISTICS					
Input	LED operate current	I_{Fon}	5.0 mA / min	5.0 mA / min	5.0 mA / min
	LED turn off current	I_{Foff}	0.35 mA / Typ.	0.35 mA / Typ.	0.35 mA / Typ.
	LED dropout voltage	V_F	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA
Output	On resistance	R_{on}	0.13 Ω / Typ.	0.13 Ω / Typ.	5 Ω / Typ.
	Output Capacitance	C_{out}	115 pF / max.	115 pF / Typ.	115 pF / Typ.
	Off state leakage current	I_{Leak}	0.5 μ A / max.	0.5 μ A / max.	0.5 μ A / max.
Transfer Characteristics	Turn-on Time	T_{on}	1.0 mS / Typ.	1.0 mS / Typ.	0.4 mS / Typ.
	Turn-off Time	T_{off}	0.6 mS / Typ.	0.06 mS / Typ.	0.05 mS / Typ.
	I/O capacitance	C_{Iso}	0.8 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.
	Initial I/O isolation resistance	R_{Iso}	10^{10} Ω / min	10^{10} Ω / min	10^{10} Ω / min

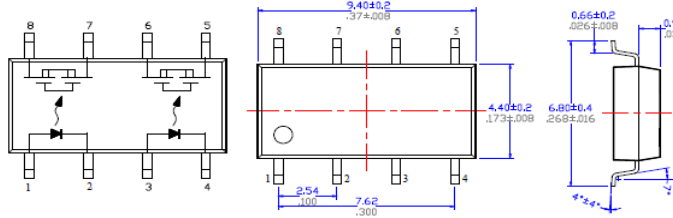
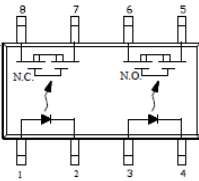
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BRAND		IC-HI	IC-HI	IC-HI	IC-HI
Part / No.		HY310GS	HY314S	HY314GS	HY316S
Photographs					
回路接續圖 Figure.(TOP VIEW)					
Output Type		1 Form A	1 Form A	1 Form A	1 Form A
Package		SOP 4	SOP 4	SOP 4	SOP 4
Size (L xW xH) mm		4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0
Break Down Voltage	V_L	350V	400V	400V	600V
Continuous Load Current	I_L	250 mA	100 mA	250 mA	80 mA
Pulse Load Current	I_{Peak}	0.7 A	0.6 A	0.8 A	1.0 A
Total power Dissipation		200 mW	350 mW	210 mW	500 mW
Isolation Voltage	V_{Iso}	1,500 VAC	1,500 VAC	1,500 VAC	1,500 VAC
ELECTRICAL CHARACTERISTICS					
Input	LED operate current	I_{Fon}	5.0 mA / min	5.0 mA / min	5.0 mA / min
	LED turn off current	I_{Foff}	0.35 mA / Typ.	0.35 mA / Typ.	0.35 mA / Typ.
	LED dropout voltage	V_F	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA
Output	On resistance	R_{on}	12 Ω / Typ.	20 Ω / Typ.	8 Ω / Typ.
	Output Capacitance	C_{out}	330 pF / Typ.	115 pF / Typ.	20 pF / Typ.
	Off state leakage current	I_{Leak}	0.5 μ A / max.	0.5 μ A / max.	0.5 μ A / max.
Transfer Characteristics	Turn-on Time	T_{on}	0.6 mS / Typ.	0.23 mS / Typ.	0.6 mS / Typ.
	Turn-off Time	T_{off}	0.03 mS / Typ.	0.03 mS / Typ.	0.02 mS / Typ.
	I/O capacitance	C_{Iso}	0.8 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.
	Initial I/O isolation resistance	R_{Iso}	10^{10} Ω / min	10^{10} Ω / min	10^{10} Ω / min

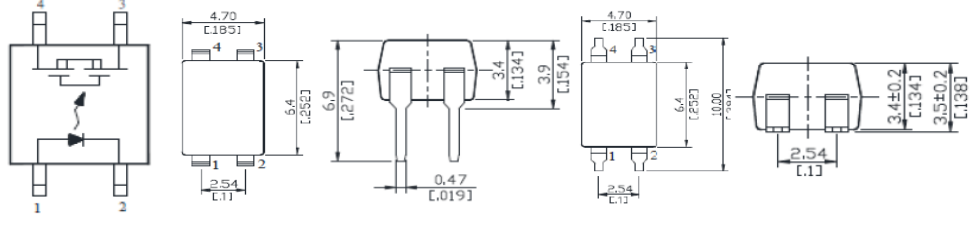
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BRAND		IC-HI	IC-HI	IC-HI	IC-HI
Part / No.		HY311DGS	HY311DG2S	HY322RS	HY325NS
Photographs					
回路接續圖 Figure.(TOP VIEW)					
Output Type		1 Form A	1 Form A	1 Form A	1 Form A
Package		SOP 4	SOP 4	SOP 4	SOP 4
Size (L xW xH) mm		4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0	4.4 × 4.3 × 2.0
Break Down Voltage	V _L	20V (DC only)	40V (DC only)	60V	80V
Continuous Load Current	I _L	5000 mA	3500 mA	400 mA	30 mA
Pulse Load Current	I _{Peak}	35.0 A	5.0 A	1.0 A	0.1 A
Total power Dissipation	P _T	2 W	600 mW	350 mW	300 mW
Isolation Voltage	V _{ISO}	1,500 VAC	1,500 VAC	1,500 VAC	1,500 VAC
ELECTRICAL CHARACTERISTICS					
Input	LED operate current	I _{Fon}	5.0 mA / min	5.0 mA / min	5.0 mA / min
	LED turn off current	I _{Foff}	0.35 mA / Typ.	-	0.35 mA / Typ.
	LED dropout voltage	V _F	1.2 V / Typ. @ I _F = 10 mA	1.2 V / Typ. @ I _F = 10 mA	1.2 V / Typ. @ I _F = 10 mA
Output	On resistance	R _{on}	0.2 Ω / Typ.	0.05 Ω / Typ.	0.8 Ω / Typ.
	Output Capacitance	C _{out}	500 pF / Typ.	240 pF / Typ.	28 pF / Typ.
	Off state leakage current	I _{Leak}	0.5 uA / max.	0.1 uA / max.	10 nA / max.
Transfer Characteristics	Turn-on Time	T _{on}	0.5 mS / Typ.	0.4 mS / Typ.	0.25 mS / Typ.
	Turn-off Time	T _{off}	0.03 mS / Typ.	0.03 mS / Typ.	0.02 mS / Typ.
	I/O capacitance	C _{ISO}	0.8 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.
	Initial I/O isolation resistance	R _{ISO}	10 ⁹ Ω / min	10 ¹⁰ Ω / min	10 ¹⁰ Ω / min

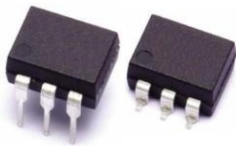
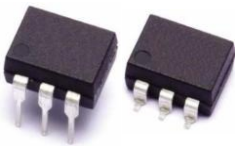
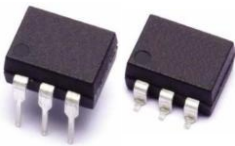
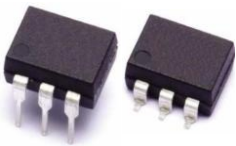
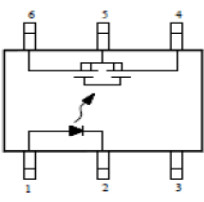
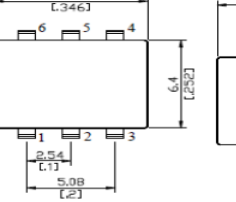
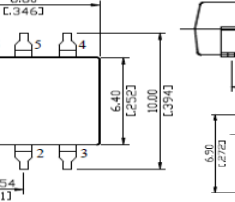
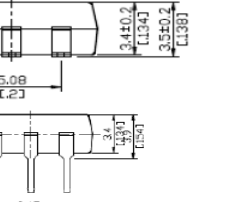
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BRAND		IC-HI	IC-HI	IC-HI	IC-HI
Part / No.		HW311G2S	HW312G2S	HW315G2S	HW714GS
Photographs					
回路接續圖 Figure.(TOP VIEW)					
Output Type		2 Form A	2 Form A	2 Form A	1 Form A + 1 Form B
Package		SOP 8	SOP 8	SOP 8	SOP 8
Size (L xW xH) mm		4.4 × 9.4 × 2.0	4.4 × 9.4 × 2.0	4.4 × 9.4 × 2.0	4.4 × 9.4 × 2.0
Break Down Voltage	V_L	40V	60V	100V	400V
Continuous Load Current	I_L	2500 mA	1100 mA	1100 mA	120 mA
Pulse Load Current	I_{Peak}	4.0 A	4.0 A	3.0 A	0.6 A
Total power Dissipation		500 mW	450 mW	400 mW	500 mW
Isolation Voltage	V_{Iso}	1,500 VAC	1,500 VAC	1,500 VAC	1,500 VAC
ELECTRICAL CHARACTERISTICS					
Input	LED operate current	I_{Fon}	5.0 mA / min	5.0 mA / min	5.0 mA / min
	LED turn off current	I_{Foff}	0.35 mA / Typ.	0.35 mA / Typ.	0.35 mA / Typ.
	LED dropout voltage	V_F	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA
Output	On resistance	R_{on}	0.06 Ω / Typ.	0.13 Ω / Typ.	0.13 Ω / Typ.
	Output Capacitance	C_{out}	190 pF / Typ.	115 pF / Typ.	115 pF / Typ.
	Off state leakage current	I_{Leak}	0.1 μ A / max.	1.0 μ A / max.	1.0 μ A / max.
Transfer Characteristics	Turn-on Time	T_{on}	0.8 ms / Typ.	1.0 ms / Typ.	1.0 ms / Typ.
	Turn-off Time	T_{off}	0.02 ms / Typ.	0.6 ms / Typ.	0.06 ms / Typ.
	I/O capacitance	C_{Iso}	0.8 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.
	Initial I/O isolation resistance	R_{Iso}	10^{10} Ω / min	10^{10} Ω / min	10^{10} Ω / min

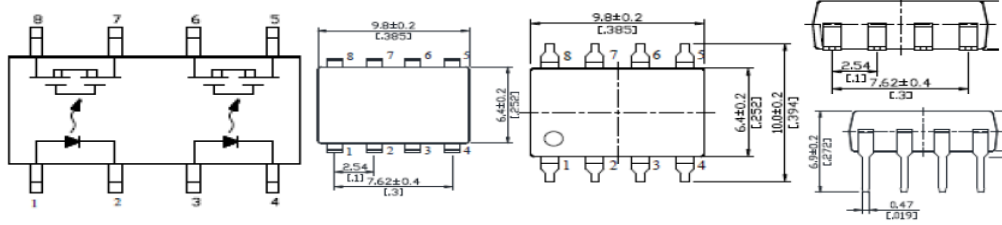
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BRAND		IC-HI	IC-HI	IC-HI	IC-HI
Part / No.		HY311G2(A)	HY312G2(A)	HY314(A)	HY512(A)
Photographs					
回路接續圖 Figure.(TOP VIEW)					
Output Type		1 Form A	1 Form A	1 Form A	1 Form B
Package		DIP 4 / SMD 4	DIP 4 / SMD 4	DIP 4 / SMD 4	DIP 4 / SMD 4
Size (L xW xH) mm		4.7 x 6.4 x 3.4	4.7 x 6.4 x 3.4	4.7 x 6.4 x 3.4	4.7 x 6.4 x 3.4
Break Down Voltage	V_L	40V	60V	400V	60V
Continuous Load Current	I_L	2000 mA	1100 mA	130 mA	500 mA
Pulse Load Current	I_{Peak}	2.5 A	4.0 A	0.6 A	0.6 A
Total power Dissipation	P_T	2 W	450 mW	350 mW	350 mW
Isolation Voltage	V_{Iso}	3750 VAC	3750 VAC	3750 VAC	3750 VAC
ELECTRICAL CHARACTERISTICS					
Input	LED operate current	I_{Fon}	5.0 mA / min	5.0 mA / min	5.0 mA / min
	LED turn off current	I_{Foff}	0.35 mA / Typ.	0.35 mA / Typ.	0.4 mA / Typ.
	LED dropout voltage	V_F	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA
Output	On resistance	R_{on}	0.06 Ω / Typ.	0.27 Ω / Typ.	20 Ω / Typ.
	Output Capacitance	C_{out}	150 pF / Typ.	115 pF / Typ.	110 pF / Typ.
	Off state leakage current	I_{Leak}	1.0 μ A / max.	1.0 μ A / max.	1.0 μ A / max.
Transfer Characteristics	Turn-on Time	T_{on}	0.8 mS / Typ.	1.5 mS / Typ.	0.5 mS / Typ.
	Turn-off Time	T_{off}	0.02 mS / Typ.	0.05 mS / Typ.	0.03 mS / Typ.
	I/O capacitance	C_{Iso}	0.8 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.
	Initial I/O isolation resistance	R_{Iso}	10^{10} Ω / min	10^9 Ω / min	10^{10} Ω / min

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BRAND		IC-HI	IC-HI	IC-HI	IC-HI
Part / No.		HV312(A)	HV312G2(A)	HV316(A)	HV514(A)
Photographs					
回路接續圖 Figure.(TOP VIEW)					
Output Type		1 Form A	1 Form A	1 Form A	1 Form B
Package		DIP 6 / SMD 6	DIP 6 / SMD 6	DIP 6 / SMD 6	DIP 6 / SMD 6
Size (L xW xH) mm		8.8 x 6.4 x 3.4	8.8 x 6.4 x 3.4	8.8 x 6.4 x 3.4	8.8 x 6.4 x 3.4
Break Down Voltage	V_L	60V	60V	600V	400V
Continuous Load Current	I_L	400 mA	1100 mA	80 mA	120 mA
Pulse Load Current	I_{Peak}	1.0 A	4.0 A	1.0 A	0.3 A
Total power Dissipation		500 mW	450 mW	500 mW	550 mW
Isolation Voltage	V_{Iso}	3750 VAC	3750 VAC	3750 VAC	3750 VAC
ELECTRICAL CHARACTERISTICS					
Input	LED operate current	I_{Fon}	5.0 mA / min	5.0 mA / min	5.0 mA / min
	LED turn off current	I_{Foff}	0.35 mA / Typ.	0.35 mA / Typ.	0.35 mA / Typ.
	LED dropout voltage	V_F	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA
Output	On resistance	R_{on}	1 Ω / Typ.	0.27 Ω / Typ.	35 Ω / Typ.
	Output Capacitance	C_{out}	115 pF / Typ.	115 pF / Typ.	115 pF / Typ.
	Off state leakage current	I_{Leak}	1.0 μ A / max.	1.0 μ A / max.	10 μ A / max.
Transfer Characteristics	Turn-on Time	T_{on}	0.5 mS / Typ.	1.5 mS / Typ.	0.3 mS / Typ.
	Turn-off Time	T_{off}	0.35 mS / Typ.	0.05 mS / Typ.	0.02 mS / Typ.
	I/O capacitance	C_{Iso}	0.8 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.
	Initial I/O isolation resistance	R_{Iso}	10^{10} Ω / min	10^{10} Ω / min	10^9 Ω / min

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BRAND		IC-HI	IC-HI	IC-HI	IC-HI
Part / No.		HW311G2(A)	HW312G2(A)	HW314(A)	HW712(A)
Photographs					
回路接續圖 Figure.(TOP VIEW)					
Output Type		2 Form A	2 Form A	2 Form A	1 Form A + 1 Form B
Package		DIP 8 / SMD 8	DIP 8 / SMD 8	DIP 8 / SMD 8	DIP 8 / SMD 8
Size (L xW xH) mm		9.8 x 6.4 x 3.4	9.8 x 6.4 x 3.4	9.8 x 6.4 x 3.4	9.8 x 6.4 x 3.4
Break Down Voltage	V_L	40V	60V	400V	60V
Continuous Load Current	I_L	2000 mA	1100 mA	130 mA	400 mA
Pulse Load Current	I_{Peak}	2.5 A	2.5 A	0.6 A	700 mA
Total power Dissipation	P_T	2 W	450 mW	350 mW	500 mW
Isolation Voltage	V_{Iso}	3750 VAC	3750 VAC	3750 VAC	3750 VAC
ELECTRICAL CHARACTERISTICS					
Input	LED operate current	I_{Fon}	5.0 mA / min	5.0 mA / min	5.0 mA / min
	LED turn off current	I_{Foff}	0.35 mA / Typ.	0.35 mA / Typ.	0.35 mA / Typ.
	LED dropout voltage	V_F	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA	1.2 V / Typ. @ $I_F = 10$ mA
Output	On resistance	R_{on}	0.06 Ω / Typ.	0.27 Ω / Typ.	20 Ω / Typ.
	Output Capacitance	C_{out}	190 pF / Typ.	115 pF / Typ.	110 pF / Typ.
	Off state leakage current	I_{Leak}	1.0 μ A / max.	1.0 μ A / max.	1 μ A / max.
Transfer Characteristics	Turn-on Time	T_{on}	0.8 mS / Typ.	1.5 mS / Typ.	0.23 (N.O.) mS / Typ. 0.2 (N.C.) mS / Typ.
	Turn-off Time	T_{off}	0.02 mS / Typ.	0.05 mS / Typ.	0.03 (N.O.) mS / Typ. 0.5 (N.C.) mS / Typ.
	I/O capacitance	C_{Iso}	0.8 pF / Typ.	0.8 pF / Typ.	0.8 pF / Typ.
	Initial I/O isolation resistance	R_{Iso}	10^{10} Ω / min	10^{10} Ω / min	10^{10} Ω / min

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