FAIRCHILD SEMICONDUCTOR® Optoisolators

SCR and Triac Output Optoisolators *(Cont.)*

Fig.	Isolation Volt.	Max. IF Trigger (mA)	Minimum Blocking Voltage	Max. IDRM	Digi-Key Part No.	Price Each 1	10	100
5	5300	10	250	.100	MOC3011M-ND	.68	.53	.38
	5300	5	250	.100	MOC3012M-ND	.68	.53	.38
	5300	30	400	.100	MOC3020MFS-ND	.78	.61	.44
	5300	15	400	.100	MOC3021MFS-ND	.86	.67	.48
	5300	10	400	.100	MOC3022MFS-ND	.73	.57	.41
	5300	10	400	.100	MOC3022VM-ND†	.78	.61	.44
	5300	5	400	.100	MOC3023MFS-ND	.73	.57	.41
	5300	15	600	.100	MOC3051M-ND	1.04	.85	.59
	5300	10	600	.100	MOC3052M-ND	1.05	.86	.60
	5300	15	250	.100	MOC3031M-ND	1.12	.92	.64
	5300	10	250	.100	MOC3032M-ND	1.04	.85	.59
	5300	5	250	.100	MOC3033M-ND	1.17	.95	.66
	5300	15	400	.100	MOC3041M-ND	1.25	1.02	.71
	5300	10	400	.100	MOC3042M-ND	1.25	1.02	.71
	5300	5	400	.100	MOC3043M-ND	1.34	1.09	.76
	5300	15	600	.500	MOC3061M-ND	1.21	.99	.69
	5300	10	600	.500	MOC3062M-ND	1.25	1.02	.71
	5300	5	600	.500	MOC3063M-ND	1.19	.97	.67
	5300	15	800	.500	MOC3081M-ND	1.64	1.34	.93
	5300	10	800	.500	MOC3082M-ND	1.56	1.27	.88
	5300	5	800	.500	MOC3083M-ND	1.86	1.52	1.05
	5300	5	600	.100	MOC3163M-ND	2.46	2.18	1.41
	7500	60	5300	100nA	MOC3052TVM-ND	1.04	.85	.59
	7500	60	5300	500nA	MOC3063TVM-ND	1.38	1.13	.78
6	5300	5	250	.100	MOC3012SM-ND	.80	.63	.45
	5300	5	400	.100	MOC3023SM-ND	.73	.57	.41
	5300	60	400	100nA	MOC3023SR2MCT-ND‡	.92	.72	.51
	5300	60	400	100nA	MOC3023SR2MTR-ND◊		277.02/1,000	
	7500	60	600	100nA	MOC3052SR2VMCT-ND‡	1.24	.96	.69
	7500	60	600	100nA	MOC3052SR2VMTR-ND◊		372.60/1,000	
	7500	60	400	100nA	MOC3043SR2MCT-ND‡	1.60	1.29	.90
	7500	60	400	100nA	MOC3043SR2MTR-ND◊		498.96/1,000	
	7500	60	600	100nA	MOC3063SR2MCT-ND‡	1.60	1.29	.90
	7500	60	600	100nA	MOC3063SR2MTR-ND◊		498.96/1,000	
	7500	60	5300	100nA	MOC3021SR2MCT-ND‡	.92	.71	.51
	7500	60	5300	100nA	MOC3021SR2MTR-ND◊		275.40/1,000	
	7500	60	5300	100nA	MOC3023SR2MCT-ND‡	.92	.72	.51
	7500	60	5300	100nA	MOC3023SR2MTR-ND◊		277.02/1,000	
	7500	60	5300	100nA	MOC3052SM-ND	1.04	.85	.59
	7500	60	5300	100nA	MOC3052SR2MCT-ND‡	1.24	.96	.69
	7500	60	5300	100nA	MOC3052SR2MTR-ND◊		372.60/1,000	
	7500	60	5300	100nA	MOC3043SM-ND	1.21	.99	.69
	7500	60	5300	500nA	MOC3083SR2MCT-ND‡	1.75	1.40	.98
	7500	60	5300	500nA	MOC3083SR2MTR-ND◊		544.32/1,000	

† VDE approval ‡ Cut Tape ◊ Tape and Reel

Logic Output Optoisolators

Fig.	Function	Input: LSTTL Output	15M Baud Rt. Output Configuration	Digi-Key Part No.	Price Each 1	10	100
9	Buff.	TTL	Totem Pole	HCPL2630S-ND	3.69	3.31	2.14
	Buff.	TTL	Totem Pole	FOD0710-ND	5.31	4.43	3.19
	Buff.	TTL	Totem Pole	FOD0720-ND	5.85	4.88	3.51
	Buff.	TTL	Totem Pole	FOD0721-ND	6.42	5.35	3.86

Fig.	Iso-lation Volt.	Ifon Current (Max.) mA	ICCL (Max.)	Oper. Voltage (Max.) mV	Digi-Key Part No.	Price Each 1	10	100	T & R Pricing◊ 1,000
5	5300	1.6	5	16	H11L1-MQT-ND	1.04	.82	.59	—
	5300	1.6	5	16	H11L1V-MQT-ND†	1.04	.81	.58	—
	5300	3.2	10	16	H11N1-MQT-ND	2.84	2.52	1.62	—
	5300	10	10	16	H11N3-M-ND	2.80	2.48	1.60	—
	7500	1.6	5	15	H11L1TVM-ND†	1.12	.87	.63	—
	7500	1.6	5	15	H11L1VM-ND	1.12	.87	.63	—
	7500	10.0	5	15	H11L2TVM-ND†	1.07	.87	.61	—
	7500	10.0	5	15	H11L2VM-ND†	1.12	.87	.63	—
	7500	60	5	16	H11L3M-ND	1.12	.87	.63	—
	7500	10.0	5	15	H11L2M-ND	1.12	.87	.63	—
6	5300	1.6	5	16	H11L1SM-ND	1.12	.87	.63	—
	7500	60	5	15	H11L1SR2MCT-ND‡	1.19	.92	.66	356.40
	7500	1.6	5	15	H11L1SR2VMCT-ND‡	1.17	.94	.65	362.88
	7500	1.6	5	15	H11L1SVM-ND†	1.12	.87	.63	—
	7500	10.0	5	15	H11L2SM-ND	1.07	.87	.61	—
	7500	10.0	5	15	H11L2SR2MCT-ND‡	1.17	.94	.65	362.88
	7500	10.0	5	15	H11L2SVM-ND†	1.07	.87	.61	—
8	2500	50	13	7.0	6N137SDCT-ND‡	1.38	1.11	.77	429.41
	2500	—	—	—	HCPL2631SDCT-ND‡	2.87	2.57	1.67	1039.50
	2500	50	13	5.5	HCPL0600-ND	2.88	2.59	1.67	—
	2500	—	—	—	HCPL062N-ND	6.16	5.13	3.70	—
	3750	50	13	5.5	HCPL0601-ND	3.54	3.17	2.06	—
	3750	—	—	—	HCPL0638-ND	3.45	2.88	2.07	—
	5000	1.6	7.0	2.0	FOD2200SDVCT-ND‡	3.20	2.87	1.86	1158.30

◊ For Tape and Reel change CT-ND to TR-ND ‡ Cut Tape † VDE approval

Fig.	Iso-lation Voltage	Maximum Prop. Delay (nS)	Typical CMR V/µsec.	IF (mA)	Digi-Key Part No.	Price Each 1	10	100
8	2500	100	10,000	50	6N137S-ND	1.12	.91	.63
9	2500	75	10,000	5	6N137QT-ND	1.12	.91	.63
	2500	75	10,000	5	HCPL2601QT-ND	1.83	1.63	1.05
	2500	75	10,000	5	HCPL2611-ND	2.09	1.86	1.20
	2500	75	10,000	5	HCPL2630QT-ND	3.40	3.02	1.95
	2500	75	10,000	5	HCPL2631QT-ND	2.65	2.35	1.52

Fig.	Isolation Voltage	BVCEO Minimum	Typ. ton/toff (µsec.)	Digi-Key Part No.	Price Each 1	10	100
9	2500	5	1/1	MID400-ND	3.50	2.92	2.10

FET Outputs

Fig.	Isolation Voltage	Rds ON (Ω)	Vbr (Min.)	Typ. ton/toff (µS)	Digi-Key Part No.	Price Each 1	10	100
5	4000	10	7	3,000/500	HSR312-ND	3.25	2.88	1.86
	4000	15	7	3,000/500	HSR312L-ND	3.25	2.88	1.86
9	5000	1.5	5	75/55	FOD3180S-ND ***NEW!***	2.08	1.66	1.25
	5000	1.5	5	75/55	FOD3180SDVCT-ND‡ ***NEW!***	2.10	1.68	1.26
	5000	1.5	5	75/55	FOD3180SDVTR-ND◊ ***NEW!***		1092.00/1,000	
10	2500	30	6	1/5	FODB100FSCT-ND‡	2.36	2.11	1.37
	2500	30	6	1/5	FODB100FSTR-ND◊		2418.00/3,000	
	2500	30	6	1/5	FODB102CT-ND‡	2.36	2.11	1.37
	2500	30	6	1/5	FODB102TR-ND◊		2418.00/3,000	

‡ Cut Tape ◊ Tape and Reel

NEW! Interrupter Switch

Fig.	IF mA	Emitter V_{CEO}	Detector IC	Detector V_{CEO}	Digi-Key Part No.	Price Each 1	10	100
11	20	6	20mA	30	MOC70P1-ND	1.25	1.02	.71
	20	6	20mA	30	MOC70P2-ND	1.25	1.02	.71
	20	6	20mA	30	MOC70P3-ND	1.30	1.06	.73

Panasonic® Optoisolators

Fig. 1

1. Anode
2. Cathode
3. Emitter
4. Collector

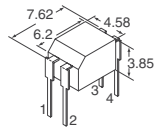
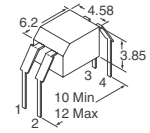


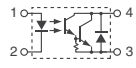
Fig. 2

1. Anode
2. Cathode
3. Emitter
4. Collector

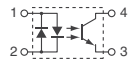


Circuits

A



B



C

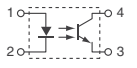


Fig.	Circuit	Isolation Voltage (Vrms)	Current Transfer Ratio	VCEO (Max.)	Typical ton/toff (µsec.)	Digi-Key Part No.	Price Each 1	10	100
1	C	5000	80 ~ 600%	80	2/3	CNC1S101-ND	.58	.47	.35
	C	5000	100 ~ 300%	80	2/3	CNC1S101R-ND	.51	.39	.29
	C	5000	200 ~ 600%	80	2/3	CNC1S101S-ND	.51	.39	.29
	C	5000	100 ~ 250%	80	2/3	CNC1S171R0LF-ND	.56	.43	.32
	C	5000	200 ~ 600%	80	2/3	CNC1S171S0LF-ND	.56	.43	.32
	B	5000	20 ~ 300%	80	4/3	CNC7S101-ND	.72	.54	.41
	B	5000	50 ~ 150%	80	4/3	CNC7S101R-ND	.77	.58	.44
	B	5000	100 ~ 300%	80	4/3	CNC7S101S-ND	.77	.58	.44

Fig.	Circuit	Isolation Voltage (Vrms)	Current Transfer Ratio	VCEO (Max.)	Typical ton/toff (µsec.)	Digi-Key Part No.	Price Each 1	10	100
1	A	5000	80 ~ 240%	80	4/3	CNC7S101Y-ND	.77	.58	.44
	A	5000	1000 ~ 4000%	350	40/15	CNC2S501-ND	.85	.71	.57
	A	5000	1000 ~ 4000%	350	40/15	CNZ3731-ND	.77	.65	.52
2	C	5000	100 ~ 300%	80	2/3	CNC1S101R0LF-ND	.56	.43	.32
	C	5000	200 ~ 600%	80	2/3	CNC1S101S0LF-ND	.56	.43	.32
	C	5000	50 ~ 600%	80	2/3	CNC1S171-ND	.71	.54	.40
	C	5000	100 ~ 250%	80	2/3	CNC1S171R-ND	.51	.39	.29
	C	5000	200 ~ 600%	80	2/3	CNC1S171S-ND	.51	.39	.29

N

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.