ON Semiconductor®

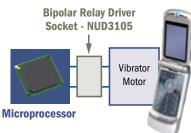


SGD525/D Rev. 0, Aug-2006

Selection. Service. Support.

Integrated, Reliable Relay Drive Circuit Selector Guide

5 V Relay Driver Socket



24 V Relay Driver Socket



12 V Relay Driver Socket





Most relays mounted to a PCB require a relay driver circuit!

Features

- Integrates diodes, resistors and capacitors into one circuit
- Delivers additional current to the relay coil and protects against ESD
- Meets IEC61000-4-4 Electrical Fast Transient (EFT) test standards

Applications

Motors and electro-mechanical relays for:

- Automotive windows and door locks
- Consumer appliances, electronics, and toys
- Telecom modems

Available Relay Drive Circuits

Device	Configuration	Circuit Type *	Voltage/Current	Package
MDC3105	Single	Bipolar-Clamp	5 V / 500 mA	S0T-23
MDC3105D	Dual	Bipolar-Clamp	5 V / 500 mA	SC-74
NUD3105	Single	MOSFET	5 V / 500 mA	S0T-23
NUD3105D	Dual	MOSFET	5 V / 500 mA	SC-74
NUD3112	Single	Bipolar-Freewheeling	12 V / 500 mA	S0T-23
NUD3112D	Dual	Bipolar-Freewheeling	12 V / 500 mA	SC-74
NUD3124	Single	MOSFET	24 V / 150 mA	S0T-23
NUD3124D	Dual	MOSFET	24 V / 150 mA	SC-74
NUD3160	Single	MOSFET	60 V / 150 mA	S0T-23
NUD3160D	Dual	MOSFET	60 V / 150 mA	SC-74
NUD3048	Single	MOSFET	100 V / 900 mA	SC-74

* Bipolar: the driver circuit consists of a transistor combined with resistors and diodes. MOSFET: the driver circuit consists of a MOSFET combined with resistors and diodes.

www.onsemi.com

Sales and Design Assistance from ON Semiconductor



www.onsemi.com

ON Semiconductor Distribution Partners					
All American	www.allamerican.com	(800) 573-2727			
Arrow Electronics	www.arrow.com	(800) 777-2776			
Avnet	www.em.avnet.com	(800) 332-8638			
Chip Supply	www.chipsupply.com	(407) 298-7100			
Digi-Key	www.digikey.com	(800) 338-1003			
EBV Elektronik	www.ebv.com/en/locations.html	(49) 8121 774-0			
Farnell InOne	www.farnellinone.com	+44 8701 200 200			
Future Electronics Europe	www.futureelectronics.com/contact	info-eur-future@futureelectronics.com			
Future & FAI Electronics	www.futureelectronics.com/contact	1-800-FUTURE1 (388-8731)			
Minco	www.mincotech.com	(512) 834-2022			
Mouser Electronics	www.mouser.com	(800) 346-6873			
Newark Electronics	www.newark.com	(800) 4-NEWARK			
Rochester Electronics	www.rocelec.com	(978) 462-9332			
Semi Dice Inc	www.semidice.com	1 (800) 345-6633			
Silica (An Avnet Company)	www.silica.com	+33 1 6447 2929			
Spoerle	www.spoerle.de/de/about/offices	+49 6103 3040			

Alabama	Huntsville	e-Components	(256) 533-2444		
	Huntsville	ON Sales Office	(256) 774-1004		
Arizona	Phoenix	Compass Southwest	(480) 763-0968		
California	Santa Clara	T3 Technical Sales	(408) 350-3900		
	Irvine	Compass Southwest	(949) 580-0270		
	San Diego	Compass Southwest	(858) 635-5959		
CANADA	All Regions	Astec	(905) 607-1444		
Colorado	Englewood	ON Sales Office Karl Hill: (720) 895- Mike Barone: (303)			
Connecticut	Monroe	Impact Technical Sales	(203) 268-7229		
Florida	Boca Raton	e-Components	(561) 289-1379		
	Lake Mary	e-Components	(407) 804-0042		
	Plantation	ON Sales Office	(954) 325-1223		
	Palm Harbor	e-Components	(727) 937-3016		
	Melbourne	e-Components	(321) 676-5659		
Georgia	Duluth	e-Components	(678) 380-5080		
Illinois	Hoffman Estates	Stan Clothier	(847) 781-4010		
Indiana	Fishers	Bear VAI	(317) 570-0707		
	Kokomo	ON Sales Office	(765) 865-2091		
lowa	Cedar Rapids	Stan Clothier	(319) 393-1576		
Kansas	Overland Park	Stan Clothier	(913) 894-1675		
Maryland	Columbia	Third Wave Solutions	(410) 290-5990		
Massachusetts	Burlington	Impact Technical Sales	(781) 238-8888		
	Lowell	ON Sales Office	(978) 452-6075		
Michigan	Livonia	ON Sales Office	(734) 953-6848		
Minnesota	Eden Prairie	Stan Clothier	(952) 944-3456		
Missouri	St. Charles	Stan Clothier	(636) 916-3777		
New Jersey	Denville	CJR Associates	(973) 625-2796		
New York	Long Island	CJR Associates	(973) 625-2796		
	New York City	CJR Associates	(973) 625-2796		
	Rochester	TriTech	(716) 385-6500		
	Binghamton	TriTech	(607) 722-3580		
Ohio	Brecksville	Bear VAI	(937) 748-1341		
Oregon	Portland	SiFore Technical Sales	(503) 977-6267		
Pennsylvania	Hatboro	Delta Technical Sales	(215) 957-0600		
Texas	Austin	West Associates	(512) 343-1199		
	Richardson	West Associates	(972) 680-2800		
Washington	Bellevue	SiFore Technical Sales	(425) 990-4701		
Wisconsin	Statewide	Stan Clothier	(847) 781-4010		

INTERNATI	ONAL		INTERNATIO	NAL		INTERNATION	AL	
BRAZIL	San Paulo	(55-11) 3842-8911	HONG KONG	Hong Kong	852-2689-0088	MEXICO	Guadalajara	(5233)
CHINA	Beijing	86-10-8518-2323	INDIA	Bangalore	91-80-2532-5084	SINGAPORE	Singapore	65-6391
	Chengdu	86-28-8678-4078	ISRAEL	Herzelia	972 (0) 9-9609-111	SLOVAKIA	Piestany	(421) 33
	Shenzhen	86-755-8209-1128	ITALY	Milan	39 02-530-0951	TAIWAN	Taipei	886-2-23
	Shanghai	86-21-5131-7168	JAPAN	Tokyo	81-3-5773-3850	UNITED KINGDOM	Slough	44 (0) 12
FRANCE	Paris	33 (0)1 39-26-41-00	KOREA	Seoul	82-2-2190-3500			
GERMANY	Munich	49 (0) 89-93-0808-0	MALAYSIA	Penang	60-4-226-9368			

ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typical" must be validated for use ingits of thems. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is no for resale in any maner.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:

Literature Distribution Center for ON Semiconductor P.O. Box 5163, Denver, Colorado 80217 USA **Phone**: 303-675-2175 or 800-344-3860 Toll Free USA/Canada Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada **Email**: orderlit@onsemi.com N. American Technical Support: 800-282-9855 Toll Free USA/Canada.

Europe, Middle East and Africa Technical Support: Phone: 421 33 790 2910 Japan Customer Focus Center

Phone: 81-3-5773-3850

ON Semiconductor Website: www.onsemi.com

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative