

**General Information**

**1**

**Data Transmission and Control Circuits**

**2**

**Display Drivers**

**3**

**Peripheral Drivers/Power Actuators**

**4**

**Mechanical Data**

**5**

**Explanation of Logic Symbols**

**6**

# Contents

	<i>Page</i>
Alphanumeric Index . . . . .	1-3
Data Transmission and Control Circuits — Selection Guide . . . . .	1-6
Data Transmission Circuits — Cross-Reference Guide . . . . .	1-11
Control Circuits — Cross-Reference Guide . . . . .	1-13
Display Drivers — Selection Guide . . . . .	1-14
Display Drivers — Cross-Reference Guide . . . . .	1-17
Peripheral Drivers/Actuators—Selection Guide . . . . .	1-18
Peripheral Drivers/Actuators—Cross-Reference Guide . . . . .	1-20

DEVICE	PAGE NO.	DEVICE	PAGE NO.
AM26LS31C	2-3	SN55564A	3-29
AM26LS32AC	2-11	SN55ALS056	2-239
AM26LS32AM	2-11	SN55ALS057	2-239
AM26LS33AC	2-11	SN55ALS126	2-251
AM26LS33AM	2-11	SN55ALS130	2-257
AM26S10C	2-21	SN55ALS160	2-265
AM26S11C	2-21	SN55ALS161	2-275
DP8480	2-29	SN55ALS192	2-285
DP8481	2-33	SN55ALS194	2-295
DS3680I	4-3	SN55ALS195	2-305
L293	4-7	SN65076B	2-317
L293D	4-11	SN65176B	2-327
L298	4-15	SN65500E	3-37
LT1030	2-37	SN65501E	3-43
MAX232	2-43	SN65512B	3-49
MC3450	2-47	SN6551R	3-55
MC3452	2-47	SN65551	3-63
MC3453	2-55	SN65552	3-63
MC3486	2-59	SN65553	3-73
MC3487	2-65	SN65554	3-73
MC3550	2-69	SN65555	3-81
MC3552	2-69	SN65556	3-81
MC3553	2-77	SN65557	3-89
N8T26	2-81	SN65558	3-89
SN55107A	2-87	SN65563A	3-97
SN65107B	2-87	SN65564A	3-97
SN55108A	2-87	SN65ALS176	2-337
SN55108B	2-87	SN65ALS180	2-349
SN55109A	2-103	SN65C185	2-361
SN55110A	2-103	SN65C188	2-369
SN55111	2-111	SN65C1154	2-379
SN55113	2-117	SN65C1406	2-387
SN55114	2-129	SN75061	2-395
SN55115	2-137	SN75076B	2-317
SN55116	2-147	SN75107A	2-87
SN55121	2-161	SN75107B	2-87
SN55122	2-167	SN75108A	2-87
SN55138	2-173	SN75108B	2-87
SN55157	2-185	SN75109A	2-103
SN55158	2-191	SN75110A	2-103
SN55173	2-199	SN75111	2-111
SN55182	2-207	SN75112	2-103
SN55183	2-217	SN75113	2-117
SN55188	2-225	SN75114	2-129
SN55189	2-231	SN75115	2-137
SN55189A	2-231	SN75116	2-147
SN55451B	4-23	SN75117	2-147
SN55452B	4-23	SN75118	2-147
SN55453B	4-23	SN75119	2-147
SN55454B	4-23	SN75121	2-161
SN55461	4-31	SN75122	2-167
SN55462	4-31	SN75123	2-405
SN55463	4-31	SN75124	2-409
SN55464	4-31	SN75125	2-415
SN55500E	3-3	SN75126	2-421
SN55501E	3-9	SN75127	2-415
SN55551	3-15	SN75128	2-427
SN55552	3-15	SN75129	2-427
SN55553	3-23	SN75130	2-433
SN55554	3-23	SN75136	2-439
SN55563A	3-29	SN75138	2-173

†New devices added to this volume

# ALPHANUMERIC INDEX

DEVICE	PAGE NO.	DEVICE	PAGE NO.
SN75140	2-445	SN75476	4-97
SN75141	2-445	SN75477	4-97
<b>SN75146</b>	2-453	SN75478	4-97
SN75150	2-459	SN75479	4-97
SN75151	2-465	SN75500E	3-37
SN75153	2-465	SN75501E	3-43
SN75154	2-477	SN75512B	3-49
SN75155	2-485	SN75518	3-55
SN75157	2-185	SN75551	3-63
SN75158	2-191	SN75552	3-63
SN75159	2-495	SN75553	3-73
SN75160B	2-507	SN75554	3-73
SN75161B	2-515	SN75555	3-81
SN75162B	2-515	SN75556	3-81
SN75163B	2-527	SN75557	3-89
SN75164B	2-535	SN75558	3-89
SN75172	2-545	SN75563A	3-97
SN75173	2-553	SN75564A	3-97
SN75174	2-561	SN751177	2-625
SN75175	2-569	SN751178	2-625
<i>SN75176A</i>	2-577	SN751506	3-105
SN75176B	2-327	SN751508	3-113
SN75177B	2-587	SN751516	3-105
SN75178B	2-587	SN751518	3-113
SN75179B	2-599	<i>SN751730</i>	2-633
SN75182	2-207	SN754410	4-103
SN75183	2-217	SN754411	4-109
<i>SN75186</i>	2-607	<i>SN75ALS053</i>	2-639
<i>SN75188</i>	2-225	<i>SN75ALS056</i>	2-647
SN75189	2-231	<i>SN75ALS057</i>	2-647
SN75189A	2-231	<i>SN75ALS085</i>	2-659
SN75207	2-617	<i>SN75ALS121</i>	2-675
SN75207B	2-617	<i>SN75ALS123</i>	2-681
SN75372	4-39	<i>SN75ALS125</i>	2-685
SN75374	4-49	SN75ALS126	2-251
SN75435	4-59	<i>SN75ALS127</i>	2-685
SN75436	4-65	SN75ALS130	2-257
SN75437A	4-65	SN75ALS160	2-689
SN75438	4-65	SN75ALS161	2-699
<i>SN75439</i>	4-71	SN75ALS162	2-707
SN75446	4-77	SN75ALS163	2-717
SN75447	4-77	SN75ALS164	2-725
SN75448	4-77	SN75ALS165	2-735
SN75449	4-77	<i>SN75ALS170</i>	2-745
SN75451B	4-23	<i>SN75ALS171</i>	2-761
SN75452B	4-23	<i>SN75ALS176</i>	2-337
SN75453B	4-23	<i>SN75ALS176A</i>	2-337
SN75454B	4-23	<i>SN75ALS176B</i>	2-337
SN75461	4-31	<i>SN75ALS180</i>	2-349
SN75462	4-31	<i>SN75ALS191</i>	2-777
SN75463	4-31	SN75ALS192	2-285
SN75465	4-83	SN75ALS193	2-781
SN75466	4-83	SN75ALS194	2-295
SN75467	4-83	SN75ALS195	2-305
SN75468	4-83	<i>SN75ALS197</i>	2-793
SN75469	4-83	<i>SN75ALS199</i>	2-805
SN75471	4-91	<i>SN75C185</i>	2-361
SN75472	4-91	<i>SN75C188</i>	2-369
SN75473	4-91	<i>SN75C189</i>	2-817

†New devices added to this volume



DEVICE	PAGE NO.	DEVICE	PAGE NO.
SN75C189A . . . . . †	2-817	uA9636AC . . . . .	2-955
SN75C198 . . . . . †	2-827	uA9637AC . . . . .	2-961
SN75C1154 . . . . . †	2-379	uA9637AM . . . . .	2-961
SN75C1406 . . . . . †	2-387	uA9638C . . . . .	2-967
SN95176B . . . . . †	2-837	uA9639C . . . . .	2-971
TCM78808 . . . . . †	2-847	ULN2001A . . . . .	4-155
TL3695 . . . . . †	2-867	ULN2002A . . . . .	4-155
TL4810B . . . . .	3-123	ULN2003A . . . . .	4-155
TL4810BI . . . . .	3-123	ULN2004A . . . . .	4-155
TL5812 . . . . .	3-129	ULN2005A . . . . .	4-163
TL5812I . . . . .	3-129	ULN2064 . . . . .	4-163
TL16C450 . . . . . †	2-879	ULN2065 . . . . .	4-163
TL16C451 . . . . . †	2-903	ULN2066 . . . . .	4-163
TL16C452 . . . . . †	2-903	ULN2067 . . . . .	4-163
TL16C550A . . . . . †	2-925	ULN2068 . . . . .	4-169
TPIC0298 . . . . . †	4-115	ULN2069 . . . . .	4-169
TPIC2404 . . . . . †	4-123	ULN2074 . . . . .	4-175
TPIC2406 . . . . . †	4-129	ULN2075 . . . . .	4-175
TPIC2801 . . . . . †	4-141		

†New devices added to this volume

# DATA TRANSMISSION AND CONTROL CIRCUITS SELECTION GUIDE

## line drivers

APPLICATION	OUTPUT	DRIVERS PER PACKAGE	DEVICE TYPE	PKG	PAGE NUMBER
EIA Standard RS-422-A	Differential	2	SN55158	JG	2-191
			SN75158	D,J,G,P	
			SN75159	D,J,N	2-495
			SN75ALS191	D,P	2-777
			SN75ALS192	D,J,G,P	2-967
		4	MC3487	D,J,N	2-3
			SN75ALS193	D,J,N	2-65
			SN75ALS194	DW,J,N	2-465
			SN75ALS195	DW,I,N	2-465
			SN75172	D,I,N	2-545
			SN75174	D,I,N	2-561
			SN55ALS197	FK,J	2-285
			SN75ALS198	D,J,N	2-285
			SN75ALS199	FK,J	2-295
EIA Standard RS-485	Differential	4	SN75172	D,I,N	2-545
			SN75174	DW,J,N	2-561
EIA Standard RS-485-A	Single-Ended	2	SN75ALS197	D,J,G,P	2-955
EIA Standard RS-232-C	Single-Ended	2	SN75ALS197	D,J,G,P	2-955
			SN75ALS198	D,J,G,P	2-955
		4	SN75ALS199	D,J,G,P	2-955
			SN75ALS199	FK,J	2-37
			SN75ALS199	FK,J	2-225
			SN75ALS199	D,J	2-369
			SN75ALS199	D,DB,N	2-369
IBM 360/370	Single-Ended	2	SN75ALS199	D,J,N	2-405
			SN75ALS123	D,N	2-681
		4	SN75ALS126	D,J,N	2-421
			SN75ALS126	FK,J	2-251
			SN75ALS126	D,J,N	2-251
			SN75ALS130	D,J,N	2-433
			SN75ALS130	FK,J	2-257
			SN75ALS130	D,J,N	2-257
General-Purpose	Single-Ended	2	SN55121	FK,J	2-161
			SN75ALS121	D,J,N	
			SN75ALS121	D,N	2-675
			SN75ALS09A	FK,J	2-103
			SN75ALS09A	D,J,N	
			SN55110A	FK,J	2-103
			SN75110A	D,J,N	
			SN75112	D,J,N	2-103
			SN55113	FK,J	2-117
			SN75113	D,J,N	
			SN55114	FK,J	2-129
			SN75114	D,J,N	
			SN55183	FK,J	2-217
			SN75ALS183	D,J,N	

# DATA TRANSMISSION AND CONTROL CIRCUITS SELECTION GUIDE

## line drivers (continued)

APPLICATION	OUTPUT	DRIVERS PER PACKAGE	DEVICE TYPE	PKG	PAGE NUMBER
General-Purpose	Differential	4	MC3453	D,J,N	2-55
			74LS13	FK,J	2-77
			74LS11	D,J,N	2-111

## line receivers

APPLICATION	INPUT	RECEIVERS PER PACKAGE	DEVICE TYPE	PKG	PAGE NUMBER
EIA Standard RS-422-A	Differential	2	SN75146	D,J,G,P	2-453
			74LS57	JG	2-185
			74LS57	D,J,G,P	2-961
			74LS57	D,J,G,P	2-971
		4	AM26LS32A	D,FK,J,N	2-11
			74LS86	D,J,N	2-59
			74LS173	FK,J	2-199
			SN75173	D,J,N	2-553
			SN75175	D,J,N	2-569
			SN75ALS193	J	2-781
2-305	SN75ALS195	FK,J			
	SN75ALS195	J			
EIA Standard RS-485	Differential	4	SN75173	FK,J	2-199
			SN75173	D,J,N	2
			SN75175	D,J,N	2
EIA Standard RS-423-S	Single-Ended	2	SN75146	D,J,G,P	2-453
			74LS157	JG	2-185
			SN75157	D,J,G,P	2-961
			74LS157	D,J,G,P	2-971
			74LS157	D,J,G,P	2-971
			AM26LS32A	D,FK,J,N	2-11
		4	74LS173	D,J,N	2-59
			SN55173	FK,J	2-199
			SN75173	D,J,N	2
			SN75175	D,J,N	2
			SN75ALS193	J	2-781
			SN75ALS195	FK,J	2-305
EIA Standard RS-232-C	Single Ended	4	SN75154	D,J,N	2-477
			74LS189	FK,J	2-231
			74LS189	D,J,N	2-231
			74LS189A	D,J,N	2-231
			74LS189	D,DB,N	2-817
			74LS189A	D,DB,N	2-817
			SN75C189A	D,DB,N	2-817

# DATA TRANSMISSION AND CONTROL CIRCUITS SELECTION GUIDE

## line receivers (continued)

APPLICATION	INPUT	RECEIVERS PER PACKAGE	DEVICE TYPE	PKG	PAGE NUMBER
IBM 360/370	Single-Ended	3	SN75124	D,J,N	2-409
		7	SN75125	D,J,N	2-415
			SN75127	D,J,N	2-415
			SN75ALS127	D,J,N	2-415
			SN75128	DW,J,N	2-415
General-Purpose	Single-Ended	2	SN75129	DW,J,N	2-427
			SN75140	D,JG,P	2-445
		4	SN75141	D,JG,P	2-445
			SN75122	FK,J	2-167
General-Purpose	Differential	2	SN75123	D,J,N	2-87
			SN75107A	D,J,N	
			SN55107B	FK,J	2-87
			SN75107B	D,J,N	
			SN55108A	FK,J	2-87
			SN75108A	D,J,N	
			SN75108B	FK,J	2-87
			SN75108C	D,J,N	
			SN75108D	FK,J	2-137
			SN75108E	D,J,N	
		SN75108F	FK,J	2-207	
		SN75108G	D,J,N		
		4	SN75207	D,N	2-617
			SN75207B	D,N	2-617
			AM26LS33A	D,J,N	2-11
MC3450	D,J,N		2-47		
MC3452	D,J,N		2-47		
CCITT V.11 and X.27	Differential	4	MC3550	FK,J	2-69
			MC3552	FK,J	2-69
			SN75ALS197	D,N	2-793
			SN75ALS199	D,N	2-805

## line transceivers

APPLICATION	BUS I/O	TRANSCEIVERS OR DRVS/RCVS PER PACKAGE	DEVICE TYPE	PKG	PAGE NUMBER
EIA Standard RS-232-C	Single-Ended	1/1	SN75155	D,JG,P	2-485
		2/2	MAX232	D,N	2-43
		3/3	SN65C1406	D,N	2-387
			SN75C1406		
		4/4	SN75186	FN	2-607
			SN65C1154	DW,N	2-379
SN65C1154					
3/5	SN75C185	DW,N	2-361		
	SN75C185				





# DATA TRANSMISSION AND CONTROL CIRCUITS SELECTION GUIDE

## line transceivers (continued)

APPLICATION	BUS I/O	TRANSCIVERS OR DRVS/RCVS PER PACKAGE	DEVICE TYPE	PKG	PAGE NUMBER
IEEE Std 896.1-1987	Single-Ended	4	SN75ALS053	FN,N	2-639
			SN75ALS057	J,W	2-239
		SN75ALS057	DW,N	2-647	
		8	SN55A1		2-239
	SN75A1		2-647		
	SN75A1730	D,N	2-633		
36C	Single-Ended				

## translators

APPLICATION	TRANSLATORS PER PACKAGE	DEVICE TYPE	PACKAGE	PAGE NUMBER
ECL-to-TTL with Latch	5	DP8480	D,N	2-29
TTL-to-ECL with Latch	5	DP8481	D,N	2-33

## controllers

DESCRIPTION	FUNCTION	PRODUCT FEATURES	DEVICE TYPE	PACKAGE	PAGE NUMBER
ACE <sup>†</sup>	Single ACE without FIFO <sup>‡</sup>	Programmable Baud Generation	TL16C450	FN,N	2-879
ACE <sup>†</sup>	Single ACE with Parallel Port and without FIFO <sup>‡</sup>	Programmable Interface Characteristics	TL16C451	FN	2-903
ACE <sup>†</sup>	Dual ACE with Parallel Port and without FIFO <sup>‡</sup>	Programmable Interface Characteristics	TL16C452	FN	2-903
ACE <sup>†</sup>	Single ACE with FIFO <sup>‡</sup>	Functional Upgrade of the 16C450	TL16C550A	FN,N	2-925
Converter/Controller	Octal Receiver/Transmitter	Programmable Baud Rates: 50 to 19,200	TCM78808	FN,HA,HB	2-847

<sup>†</sup>ACE—Asynchronous Communications Element

<sup>‡</sup>FIFO—First In First Out

# DATA TRANSMISSION CIRCUITS CROSS-REFERENCE GUIDE

Replacements are based on similarity of electrical and mechanical characteristics as shown in currently published data. Interchangeability in particular applications is not guaranteed. Before using a device as a substitute, the user should compare the specifications of the substitute device with the specifications of the original.

Texas Instruments makes no warranty as to the information furnished and buyer assumes all risk in the use thereof. No liability is assumed for damages resulting from the use of the information contained herein.

Manufacturers are arranged in alphabetical order.

AMD	SUGGESTED TI REPLACEMENT	PAGE NO	FAIRCHILD	SUGGESTED TI REPLACEMENT	PAGE NO
AM26LS31C	AM26LS31C	2-3	$\mu$ A9636AC	$\mu$ A9636AC	2-955
AM26LS32C	AM26LS32AC	2-11	$\mu$ A9637AC	$\mu$ A9637AC	2-961
AM26LS33C	AM26LS33AC	2-11	$\mu$ A9637AM	$\mu$ A9637AM	2-961
AM26S10C	AM26S10C	2-21	$\mu$ A9638C	$\mu$ A9638C	2-967
AM26S11C	AM26S11C	2-21	$\mu$ A9639AC	$\mu$ A9639C	2-971
			$\mu$ A9640C	$\mu$ A26S10C	2-21
			$\mu$ A9641C	AM26S11C	2-21
FAIRCHILD	SUGGESTED TI REPLACEMENT	PAGE NO.	LTC	SUGGESTED TI REPLACEMENT	PAGE NO.
$\mu$ A1488C	SN75188	2-225	LT1030	LT1030	2-37
$\mu$ A1489AC	SN75189A	2-231			
$\mu$ A1489C	SN75189	2-231			
$\mu$ A26LS31C	AM26LS31C	2-3			
$\mu$ A26LS32C	AM26LS32AC	2-11			
$\mu$ A3486C	MC3486	2-59			
$\mu$ A3487C	MC3487	2-65			
$\mu$ A55107AM	SN55107A	2-87			
$\mu$ A55107BM	SN55107B	2-87			
$\mu$ A55108AM	SN55108A	2-87			
$\mu$ A55108M	SN55108B	2-87			
$\mu$ A55110M	SN55110A	2-103			
$\mu$ A55121M	SN55121	2-161			
$\mu$ A55122M	SN55122	2-167			
$\mu$ A75107AC	SN75107A	2-87			
$\mu$ A75108AC	SN75108A	2-87			
$\mu$ A75108BC	SN75108B	2-87			
$\mu$ A75108C	SN75107B	2-87			
$\mu$ A75110C	SN75110A	2-103			
$\mu$ A75150C	SN75150	2-459			
$\mu$ A75154C	SN75154	2-477			
$\mu$ A8T13C	SN75121	2-161			
$\mu$ A8T13M	SN55121	2-161			
$\mu$ A8T14C	SN75122	2-167			
$\mu$ A8T14M	SN55122	2-167			
$\mu$ A8T23C	SN75123	2-405			
$\mu$ A8T24C	SN75124	2-409			
$\mu$ A9614C	SN75114	2-129			
$\mu$ A9614M	SN55114	2-129			
$\mu$ A9615C	SN75115	2-137			
$\mu$ A9615M	SN55115	2-137			
$\mu$ A96172C	SN75172	2-545			
$\mu$ A96173C	SN75173	2-553			
$\mu$ A96174C	SN75174	2-561			
$\mu$ A96175C	SN75175	2-569			
$\mu$ A96176	SN75176B	2-327			
$\mu$ A96177	SN75177B	2-587			
$\mu$ A96178	SN75178B	2-587			
			MOTOROLA	SUGGESTED TI REPLACEMENT	PAGE NO.
			AM26LS31	AM26LS31C	2-3
			AM26LS32	AM26LS32AC	2-11
			MC1488	SN75188	2-225
			MC1489	SN75189	2-231
			MC1489A	SN75189A	2-231
			MC26S10	AM26S10C	2-21
			MC26S11	AM26S11C	2-21
			MC3450	MC3450	2-47
			MC3452	MC3452	2-47
			MC3453	MC3453	2-55
			MC3481	SN75ALS126	2-251
			MC3485	SN75ALS130	2-257
			MC3486	MC3486	2-59
			MC3487	MC3487	2-65
			MC55107	SN55107A	2-87
			MC55108	SN55108A	2-87
			MC75107	SN75107A	2-87
			MC75108	SN75108A	2-87
			MC75125	SN75125	2-415
			MC75127	SN75127	2-415
			MC75128	SN75128	2-427
			MC75129	SN75129	2-427
			MC75140	SN75140	2-445
			MC145406	SN75C1406	2-387
			MC75S110	SN75110A	2-103
			SN75172	SN75172	2-545
			SN75173	SN75173	2-553
			SN75174	SN75174	2-561
			SN75175	SN75175	2-569
			SN75176	SN75176B	2-327
			SN75177	SN75177B	2-587
			SN75178	SN75178B	2-587

# DATA TRANSMISSION CIRCUITS CROSS-REFERENCE GUIDE

NATIONAL	SUGGESTED TI REPLACEMENT	PAGE NO.	SIGNETICS	SUGGESTED TI REPLACEMENT	PAGE NO.
DP8480	DP8480	2-29	8T125	SN75125	2-415
DP8481	DP8481	2-33	8T126	SN75ALS126	2-251
DS1488	SN75188	2-225	8T127	SN75127	2-415
DS1489	SN75189	2-231	8T128	SN75128	2-427
DS1489A	SN75189A	2-231	8T129	SN75129	2-427
DS14C88	SN75C188	2-369	8T13	SN75121	2-161
DS14C89	SN75C189	2-817	8T14	SN75122	2-167
DS14C89	SN75C189A	2-817	8T23	SN75123	2-405
DS26LS31	AM26LS31C	2-3	8T24	SN75124	2-409
DS26LS32	AM26LS32AC	2-11	8T26	N8T26	2-81
DS26LS32M	AM26LS32AM	2-11	DM7820	SN55182	2-207
DS26LS33C	AM26LS33AC	2-11	DM7830	SN55183	2-217
DS26LS33M	AM26LS33AM	2-11	DM8820	SN75182	2-207
DS26S10C	AM26S10C	2-21	DM8830	SN75183	2-217
DS26S11C	AM26S11C	2-21	MC1488	SN75188	2-225
DS3486	MC3486	2-59	MC1489	SN75189	2-231
DS3487	MC3487	2-65	MC1489A	SN75189A	2-231
DS3695	TL3695	2-867			
DS3893	SN75ALS053	2-639			
DS3896	SN75ALS056	2-647			
DS3897	SN75ALS057	2-647			
DS55107	SN551078	2-87			
DS55108	SN55108A	2-87			
DS55109	SN55109A	2-103			
DS55110	SN55110A	2-103			
DS55113	SN55113	2-117			
DS55114	SN55114	2-129			
DS55115	SN55115	2-137			
DS55121	SN55121	2-161			
DS55122	SN55122	2-167			
DS75107	SN751078	2-87			
DS75108	SN751088	2-87			
DS75109	SN75109A	2-103			
DS75110	SN75110A	2-103			
DS75113	SN75113	2-117			
DS75114	SN75114	2-129			
DS75115	SN75115	2-137			
DS75121	SN75121	2-161			
DS75122	SN75122	2-167			
DS75123	SN75123	2-405			
DS75124	SN75124	2-409			
DS75125	SN75125	2-415			
DS75127	SN75127	2-415			
DS75128	SN75128	2-427			
DS75129	SN75129	2-427			
DS75150	SN75150	2-459			
DS75154	SN75154	2-477			
DS75207	SN75207	2-617			
DS75207	SN752078	2-617			
DS75108	SN751088	2-87			
DS7820A	SN55182	2-207			
DS78220	SN55182	2-207			
DS7830	SN55183	2-217			
DS8820	SN75182	2-207			
DS8820A	SN75182	2-207			
DS8830	SN75183	2-217			



Replacements are based on similarity of electrical and mechanical characteristics as shown in currently published data. Interchangeability in particular applications is not guaranteed. Before using a device as a substitute, the user should compare the specifications of the substitute device with the specifications of the original.

Texas Instruments makes no warranty as to the information furnished and the buyer assumes all risk in the use thereof. No liability is assumed for damages resulting from the use of the information contained herein.

Manufacturer's are arranged in alphabetical order.

<b>NATIONAL</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
NS16C450	TL16C450	2-879
NS16450	TL16C450	2-879
NS16550A	TL16C550A	2-925
NS16C550A	TL16C550A	

  

<b>VLSI TECHNOLOGY INC</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
VL16C450	TL16C450	2-879
VL16C451B	TL16C451	2-903
VL16C452B	TL16C452	2-903
VL16C550	TL16C550A	2-925

  

<b>WESTERN DIGITAL</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
WD8216C450	TL16C450	2-879
WD8216C451	TL16C451	2-903
WD8216C452	TL16C452	2-903

# DISPLAY DRIVERS SELECTION GUIDE

## electroluminescent display drivers

DESC.	PRODUCT FEATURES	DRIVERS PER PKG	INPUT COMPATIBILITY	POWER SUPPLY	TYPE	PKG	
ROW DRIVERS	<ul style="list-style-type: none"> <li>• 225-V open-drain DMOS outputs</li> <li>• Serial-in, parallel-out architecture</li> <li>• 50-mA current sink output capability</li> <li>• Extremely low steady-state power consumption</li> <li>• Left side (SNXX551) and right side (SNXX552) drivers enhance circuit layout</li> </ul>	32	CMOS	V <sub>CC1</sub> (logic) = 10.8 V to 15 V	SN55551	FD	
					SN65552 SN75551 SN75552	FN, N	
					SN65557 SN65558 SN75557 SN75558	FN	
	<ul style="list-style-type: none"> <li>• Monolithic BIFET integrated circuits</li> <li>• Very low steady-state power consumption</li> <li>• 300-mA output capability</li> <li>• High-voltage open-collector N-P-N its</li> </ul>	34			SN55563A SN55564A	FJ	
					<ul style="list-style-type: none"> <li>• <math>\sqrt{}</math> totem-pole BIFET output structures</li> <li>• 70-mA output source/sink capability</li> <li>• Very low steady-state power consumption</li> <li>• 3-state capabilities</li> <li>• Selectable open-source or open-drain output</li> </ul>	SN65563A SN65564A SN75563A SN75564A	FN
COLUMN DRIVERS	<ul style="list-style-type: none"> <li>• 60-V totem-pole BIFET output structures</li> <li>• Serial-in, parallel-out architecture</li> <li>• 15-mA sink or source output capability</li> <li>• Top (SNXX553) and bottom (SNXX554) drivers enhance circuit layout</li> </ul>	32	CMOS	V <sub>CC1</sub> (logic) = 10.8 V to 15 V	SN55553 SN55554	FD	
					SN65553 SN65554 SN75553 SN75554	FN, N	
	<ul style="list-style-type: none"> <li>• 90-V output voltage swing capability</li> <li>• 15-mA output source and sink current capability</li> <li>• High-speed serially-shifted data input</li> <li>• Totem-pole outputs</li> <li>• Latches on all driver outputs</li> </ul>				SN65555 SN65556 SN75555 SN75556	FN, N	



## vacuum fluorescent display drivers

DESC.	PRODUCT FEATURES	DRIVERS PER PKG	INPUT COMPATIBILITY	POWER SUPPLY	TYPE	PKG
ANODE, GRID DRIVERS FOR SEGMENT OR DOT MATRIX FORMATS	<ul style="list-style-type: none"> <li>Serial-in, parallel-out architecture</li> <li>60-V totem-pole outputs</li> <li>25-mA current source output capability</li> <li>On-board latches</li> </ul>	12	TTL	$V_{CC1}$ (logic) = 5 V to 15 V, $V_{CC2}$ (display) = 0 to 60 V	SN65512B	DW,N
					SN75512B	
	<ul style="list-style-type: none"> <li>All features same as SN65512B except:</li> <li>32-bits for large format displays</li> </ul>	32	CMOS, TTL	$V_{CC1}$ (logic) = 5 V to 15 V, $V_{CC2}$ (display) = 0 to 130 V	SN65518	FN,N
					SN75518	
	<ul style="list-style-type: none"> <li>Serial-in, parallel-out architecture</li> <li>60-V totem-pole outputs</li> <li>40-mA current source output</li> <li>Improved direct replacement for UCN4810A and TL4810A</li> </ul>	10	CMOS	$V_{CC1}$ (logic) = 5 V to 15 V, $V_{CC2}$ (display) = 0 to 60 V	TL4810B	DW,N
<ul style="list-style-type: none"> <li>70-V output voltage swing capability</li> <li>Drives up to 20 lines</li> <li>Direct replacement for Sprague UCN5812</li> </ul>	20				TL5812	FN,N
			TL5812I			

## dc plasma and gas discharge display drivers

DESC.	PRODUCT FEATURES	DRIVERS PER PKG	INPUT COMPATIBILITY	POWER SUPPLY	TYPE	PKG
SCAN LINE DRIVERS	<ul style="list-style-type: none"> <li>180-V open drain parallel outputs</li> <li>220-mA parallel output sink current</li> <li>Left side (SN751506) and right side (SN751516) drivers enhance circuit layout</li> </ul>	32	CMOS	$V_{CC}$ (logic) = 4 V to 6 V	SN751506	FT
DATA LINE DRIVERS	<ul style="list-style-type: none"> <li>120-V open collector P-N-P parallel outputs</li> <li>Two parallel high-speed 16-bit shift registers</li> <li>Latches on all driver outputs</li> <li>Top (SN751508) and bottom (SN751518) drivers enhance circuit layout</li> </ul>			$V_{CC}$ (logic) = 4.5 V to 5.5 V	SN751508	FT
					SN751518	

# DISPLAY DRIVERS SELECTION GUIDE

## ac plasma display drivers

DESC.	PRODUCT FEATURES	DRIVERS PER PKG	INPUT COMPATIBILITY	POWER SUPPLY	TYPE	PKG
AXIS DRIVERS	<ul style="list-style-type: none"> <li>• High-speed serial-in, parallel-out architecture (8 MHz)</li> <li>• Fast output transitions (150 ns typ)</li> <li>• 15-mA output current capability</li> <li>• X-axis driver (SNXX500)</li> <li>• Y-axis driver (SNXX501)</li> <li>• Military temperature packages available (SN55500, SN55501)</li> </ul>	32 (8 bits with 1 of 4 selectors)	CMOS	VCC1 (logic) = 10.8 V to 13.2 V VCC2 (display) = 0 to 100 V	SN55500E	FD, JD
		32 32 x 1			SN65500E	FN, N
					SN75500E	
		SN55501E			FD, JD	
		SN65501E			FN, N	
		SN75501E				



## DISPLAY DRIVERS CROSS-REFERENCE GUIDE

Replacements are based on similarity of electrical and mechanical characteristics as shown in currently published data. Interchangeability in particular applications is not guaranteed. Before using a device as a substitute, the user should compare the specifications of the substitute device with the specifications of the original.

Texas Instruments makes no warranty as to the information furnished and buyer assumes all risk in the use thereof. No liability is assumed for damages resulting from the use of the information contained herein.

Manufacturers are arranged in alphabetical order.

<b>GOULD/AMI</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
S4535	SN75518	3-55

  

<b>SILICONIX</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
SI9551	SN75551	3-63
SI9552	SN75552	3-63
SI9553	SN75553	3-73
SI9554	SN75554	3-73

  

<b>SPRAGUE</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
UCN5810A	TL4810B	3-123
UCN5812A	TL5812	3-129
UCN5818A	SN75518	3-55
UCN5851A	SN75551	3-63
UCN5852A	SN75552	3-63
UCN5853A	SN75553	3-73
UCN5854A	SN75554	3-73

  

<b>SUPERTEX</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
HV51	SN75551	3-63
HV52	SN75552	3-63
HV53	SN75553	3-73
HV54	SN75554	3-73

# PERIPHERAL DRIVERS/ACTUATORS SELECTION GUIDE

## General-Purpose Drivers and Actuators

SWITCHING VOLTAGE MAX (V)	OFF-STATE VOLTAGE MAX (V)	OUTPUT CURRENT (mA)	DRIVERS PER PACKAGE	OUTPUT CLAMP DIODES	INPUT CAPABILITY	FUNCTION	DELAY TIME TYP (ns)	TYPE	PKG	PAGE
20	30	300	2	NO	TTL	AND	18	SN55451B	FK,JG	4-23
20	30	300	2	NO	TTL	NAND	25	SN55452B	FK,JG	4-23
20	30	300	2	NO	TTL	OR	18	SN55453B	FK,JG	4-23
20	30	300	2	NO	TTL	NOR	26	SN55454B	FK,JG	4-23
20	30	300	2	NO	TTL	AND	18	SN75451B	D,P	4-23
20	30	300	2	NO	TTL	NAND	25	SN75452B	D,P	4-23
20	30	300	2	NO	TTL	OR	18	SN75453B	D,P	4-23
20	30	300	2	NO	TTL	NOR	26	SN75454B	D,P	4-23
24	24	500	2	YES	TTL	MOS DRIVER	35	SN75372	D,P	4-39
24	24	500	4	YES	TTL	MOS DRIVER	35	SN75374	D,N	4-49
30	35	300	2	NO	TTL	AND	28	SN55461	FK,JG	4-31
30	35	300	2	NO	TTL	NAND	38	SN55462	FK,JG	4-31
30	35	300	2	NO	TTL	OR	28	SN55463	FK,JG	4-31
30	35	300	2	NO	TTL	NOR	35	SN55464	FK,JG	4-31
30	35	300	2	NO	TTL	AND	28	SN75461	D,P	4-31
30	35	300	2	NO	TTL	NAND	38	SN75462	D,P	4-31
30	35	300	2	NO	TTL	OR	28	SN75463	D,P	4-31
30	24	1000	8	YES	TTL,CMOS	SERIAL TO PARALLEL POWER CHIP	2000	TPIC2801	KV	4-141
35	70	500	4	YES	TTL,CMOS	INVERT W ENAB	1050	SN75437A	NE	4-65
35	70	600	4	YES	TTL,CMOS	INVERT W ENAB	750	SN75435	NE	4-59
35	70	1000	4	YES	TTL,CMOS	INVERT W ENAB	1050	SN75438	NE	4-65
35	50	1250	4	YES	TTL	INVERT	500	ULN2064	NE	4-163
35	50	1250	4	YES	MOS	INVERT	500	ULN2066	NE	4-163
35	50	1250	4	YES	TTL,CMOS	INVERT	500	ULN2068	NE	4-169
35	50	1250	4	NO	TTL,CMOS	INVERT	500	ULN2074	NE	4-175
45	45	1000	4	YES	TTL,CMOS	AND	2000	TPIC2404	KN	4-123
55	70	350	2	YES	TTL,CMOS	AND	300	SN75446	D,P	4-77
55	70	350	2	YES	TTL,CMOS	NAND	300	SN75447	D,P	4-77
55	70	350	2	YES	TTL,CMOS	OR	300	SN75448	D,P	4-77
55	70	350	2	YES	TTL,CMOS	NOR	300	SN75449	D,P	4-77
50	70	500	4	YES	TTL,CMOS	INVERT W ENAB	1050	SN75436	NE	4-65
50	50	350	7	YES	TTL,CMOS,PMOS	INVERT	250	ULN2001A	D,N	4-155
50	50	350	7	YES	25 V PMOS	INVERT	250	ULN2002A	D,N	4-155
50	50	350	7	YES	TTL,CMOS	INVERT	250	ULN2003A	D,N	4-155
50	50	350	7	YES	15 V MOS	INVERT	250	ULN2004A	D,N	4-155
50	50	350	7	YES	TTL	INVERT	250	ULN2005A	D,N	4-155
50	50	1300	4	YES	TTL,CMOS	INVERT W ENAB	1500	SN75439	NE	4-71
50	80	1500	4	YES	TTL	INVERT	500	ULN2065	NE	4-163
50	80	1500	4	YES	MOS	INVERT	500	ULN2067	NE	4-163
50	80	1500	4	YES	TTL,5 V MOS	INVERT	500	ULN2069	NE	4-169
50	80	1500	4	NO	TTL,5 V MOS	INVERT	500	ULN2075	NE	4-1

# PERIPHERAL DRIVERS/ACTUATORS SELECTION GUIDE

## General-Purpose Drivers and Actuators (Continued)

SWITCHING VOLTAGE MAX (V)	OFF-STATE VOLTAGE MAX (V)	OUTPUT CURRENT (mA)	DRIVERS PER PACKAGE	OUTPUT CLAMP DIODES	INPUT CAPABILITY	FUNCTION	DELAY TIME TYP (ns)	TYPE	PKG	PAGE
55	70	300	2	NO	TTL	AND	28	SN75471	D,P	4-91
55	70	300	2	NO	TTL	NAND	38	SN75472	D,P	4-91
55	70	300	2	NO	TTL	OR	28	SN75473	D,P	4-91
55	70	300	2	YES	TTL,CMOS	AND	200	SN75476	D,P	4-97
55	70	300	2	YES	TTL,CMOS	NAND	200	SN75477	D,P	4-97
55	70	300	2	YES	TTL,CMOS	DR	200	SN75478	D,P	4-97
55	70	300	2	YES	TTL,CMOS	NOR	200	SN75479	D,P	4-97
60	60	100	4	YES	TTL,CMOS,MOS	TELECOM RY DRV	1000	8801	D,J,N	4-3
60	60	1000	4	YES	TTL,CMOS	INVERT		TPIC2406	KN	4-129
60	100	350	7	YES	TTL	INVERT	250	SN75465	D,N	4-83
60	100	350	7	YES	TTL,CMOS,PMOS	INVERT	250	SN75466	D,N	4-83
60	100	350	7	YES	25 V PMOS	INVERT	250	SN75467	D,N	4-83
60	100	350	7	YES	TTL,CMOS	INVERT	250	SN75468	D,N	4-83
60	100	350	7	YES	15 V MOS	INVERT	250	SN75469	D,N	4-83

## Motor Drivers and Power Actuators

SWITCHING VOLTAGE MAX (V)	OFF-STATE VOLTAGE MAX (V)	OUTPUT CURRENT (mA)	DRIVERS PER PACKAGE	OUTPUT CLAMP DIODES	INPUT CAPABILITY	FUNCTION	DELAY TIME TYP (ns)	TYPE	PKG	PAGE
36	36	600	4	YES	TTL	HALF-H DRIVER	600	L293D	NE	4-11
36	36	1000	4	NO	TTL	HALF-H DRIVER	600	L293	NE	4-7
36	36	1000	4	YES	TTL,CMOS	HALF-H DRIVER	600	SN754410	NE	4-103
36	36	1000	4	NO	TTL,CMOS	HALF-H DRIVER	600	SN754411	NE	4-109
46	46	2000	2	NO	TTL	FULL-H DRIVER		L298	KV	4-15
46	46	2000	2	NO	TTL	FULL-H DRIVER		TPIC0298	KV	4-115



**PERIPHERAL DRIVERS/ACTUATORS  
CROSS-REFERENCE GUIDE**

<b>RIFA</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>	<b>SILICON GENERAL</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
PBD352301	ULN2001A	4-155	SG2023	SN75468	4-83
PBD352302	ULN2004A	4-155	SG2024	SN75469	4-83
PBD352303	ULN2003A	4-155	SG75451	SN75451B	4-23
PBD352304	ULN2002A	4-155	SG75452	SN75452B	4-23
PBD352311	SN75466	4-83	SG75453	SN75453B	4-23
PBD352312	SN75469	4-83	SG75454	SN75454B	4-23
PBD352313	SN75468	4-83	SG75461	SN75461	4-31
PBD352314	SN75467	4-83	SG75462	SN75462	4-31
			SG75463	SN75463	4-31
			SG75473	SN75473	4-91
<b>SGS-ATES</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>		<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>
L201	ULN2001A	4-155	<b>SPRAGUE</b>		
L202	ULN2002A	4-155			
L203	ULN2003A	4-155	UDN-2541	SN75437A	4-65
L204	ULN2004A	4-155	UDN-3611	SN75471	4-91
L293	L293	4-7	UDN-3612	SN75472	4-91
L293	SN754411†	4-109	UDN-3613	SN75473	4-91
L293D	L293D	4-11	UDN-5711	SN75476	4-97
L293D	SN754410†	4-103	UDN-5713	SN75478	4-97
L298	L298	4-15	UDN-5714	SN75479	4-97
ULN2001	ULN2001A	4-155	UDN-5722	SN75477	4-97
ULN2002	ULN2002A	4-155	ULN-2001	ULN2001A	4-155
ULN2003	ULN2003A	4-155	ULN-2002	ULN2002A	4-155
ULN2004	ULN2004A	4-155	ULN-2003	ULN2003A	4-155
ULN2064	ULN2064	4-163	ULN-2004	ULN2004A	4-155
ULN2065	ULN2065	4-163	ULN-2005	ULN2005A	4-155
ULN2066	ULN2066	4-163	ULN-2021	SN75466	4-83
ULN2067	ULN2067	4-163	ULN-2022	SN75467	4-83
ULN2068	ULN2068	4-169	ULN-2023	SN75468	4-83
ULN2069	ULN2069	4-169	ULN-2024	SN75469	4-83
ULN2074	ULN2074	4-175	ULN-2025	SN75465	4-83
ULN2075	ULN2075	4-175	ULN-2064	ULN2064	4-163
			ULN-2065	ULN2065	4-163
			ULN-2066	ULN2066	4-163
			ULN-2067	ULN2067	4-163
			ULN-2068	ULN2068	4-169
			ULN-2069	ULN2069	4-169
			ULN-2074	ULN2074	2-175
			ULN-2075	ULN2075	2-175
<b>SILICON GENERAL</b>	<b>SUGGESTED TI REPLACEMENT</b>	<b>PAGE NO.</b>			
SG2001	ULN2001A	4-155			
SG2002	ULN2002A	4-155			
SG2003	ULN2003A	4-155			
SG2004	ULN2004A	4-155			
SG2022	SN75467	4-83			

† Consult product data sheet for possible slight product differences.

## PERIPHERAL DRIVERS/ACTUATORS CROSS-REFERENCE GUIDE

---

UNITRODE	SUGGESTED TI REPLACEMENT	PAGE NO.
L293	L293	4-7
L293	SN754411†	4-109
L293D	L293D	4-11
L293D	SN754410†	4-103
L298	L298	4-15

†Consult product data sheet for possible slight product differences.

---