SLLS065F – AUGUST 1989 – REVISED JANUARY 2000

 Meets or Exceeds the Requirements of TIA/EIA-232-F and ITU Recommendation V.28 	DW OR N PACKAGE (TOP VIEW)
 Single Chip With Easy Interface Between UART and Serial-Port Connector 	V _{DD} 1 20 V _{CC} RA1 2 19 RY1
 Less Than 9-mW Power Consumption Wide Driver Supply Voltage 4.5 V to 	RA2 [] 3 18] RY2 RA3 [] 4 17] RY3 DY1 [] 5 16] DA1
 13.2 V Driver Output Slew Rate Limited to 20 V/ve Max 	DY2 [6 15] DA2 RA4 [7 14] RY4
 30 V/μs Max Receiver Input Hysteresis 1100 mV Typ Puck Pull Persiver Outputs 	DY3 [] 8 13]] DA3 RA5 [] 9 12]] RY5 V _{SS} [] 10 11]] GND
 Push-Pull Receiver Outputs On-Chip Receiver 1-µs Noise Filter 	

- Functionally Interchangeable With Texas Instruments SN75185
- Operates Up to 120 kbit/s Over a 3-Meter Cable (See Application Information for Conditions)

description

The SN75C185 is a low-power BiMOS device containing three independent drivers and five receivers that are used to interface data terminal equipment (DTE) with data circuit-terminating equipment (DCE). Typically, the SN75C185 replaces one SN75188 and two SN75189 devices. This device conforms to TIA/EIA-232-F. The drivers and receivers of the SN75C185 are similar to those of the SN75C188 and SN75C189A, respectively. The drivers have a controlled output slew rate that is limited to a maximum of 30 V/ μ s, and the receivers have filters that reject input noise pulses that are shorter than 1 μ s. Both these features eliminate the need for external components.

The SN75C185 uses the low-power BiMOS technology. In most applications, the receivers contained in this device interface to single inputs of peripheral devices such as ACEs, UARTS, or microprocessors. By using sampling, such peripheral devices usually are insensitive to the transition times of the input signals. If this is not the case, or for other uses, it is recommended that the SN75C185 receiver outputs be buffered by single Schmitt input gates or single gates of the HCMOS, ALS, or 74F logic families.

The SN75C185 is characterized for operation from 0°C to 70°C.



Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

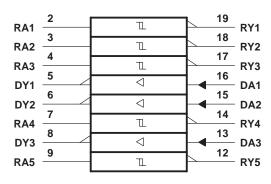
PRODUCTION DATA information is current as of publication date. Products conform to specifications per the terms of Texas Instruments standard warranty. Production processing does not necessarily include testing of all parameters.



Copyright © 2000, Texas Instruments Incorporated

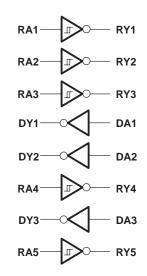
SLLS065F - AUGUST 1989 - REVISED JANUARY 2000

logic symbol[†]



[†] This symbol is in accordance with ANSI/IEEE Std 91-1984 and IEC Publication 617-12.

logic diagram (positive logic)





SLLS065F - AUGUST 1989 - REVISED JANUARY 2000

Output

DΫ́

GND

Vss

Output RY

EQUIVALENT DRIVER INPUT EQUIVALENT DRIVER OUTPUT VDD VDD Input Internal DA 1.4-V Ref to GND **160** Ω \mathcal{N} **74** Ω GND VSS **72** Ω EQUIVALENT RECEIVER INPUT EQUIVALENT RECEIVER OUTPUT Vcc Input ŔΑ **3.4 k**Ω ESD Protection **1.5 k**Ω ESD Protection ≶ **530 k**Ω ►

equivalent schematics of inputs and outputs

All resistor values are nominal.



GND

SLLS065F - AUGUST 1989 - REVISED JANUARY 2000

absolute maximum ratings over operating free-air temperature range (unless otherwise noted)[†]

$\begin{array}{c} -13.5 \ V \\7 \ V \\7 \ V_{SS} \text{ to } V_{DD} \\7 \ V_{SS} \text{ to } V_{DD} \\7 \ V_{SS} \text{ to } V_{DD} \\7 \ V_{SS} - 6 \ V \text{ to } V_{DD} + 6 \ V \\7 \ V_{SS} - 6 \ V \text{ to } V_{CC} + 0.3 \ V \\7 \ S8^{\circ} C/W \\69^{\circ} C/W \end{array}$

[†] Stresses beyond those listed under "absolute maximum ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "recommended operating conditions" is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

NOTES: 1. All voltages are with respect to network GND.

2. The package thermal impedance is calculated in accordance with JESD 51.

recommended operating conditions

			MIN	NOM	MAX	UNIT
		V _{DD}	4.5	12	13.2	V
	Supply voltage	V _{SS}	-4.5	-12	-13.2	V
		VCC	4.5	5	6	V
<u>۱</u>	Input voltage (acc Note 2)	Drivers	V _{SS} +2		V _{DD}	V
VI	Input voltage (see Note 3)	Receivers	-25		25	v
VIH	High-level input voltage	Drivers	2			V
VIL	Low-level input voltage	Drivers			0.8	V
ЮН	High-level output current	Dessiver			-1	mA
IOL	High-level output current	Receivers			3.2	mA
т _А	Operating free-air temperature	0		70	°C	

NOTE 3: The algebraic convention, where the more positive (less negative) limit is designated as maximum, is used in this data sheet for logic levels only, e.g., if -10 V is a maximum, the typical value is a more negative voltage.

supply currents

	PARAMETER	TEST	CONDITIONS		MIN	TYP	MAX	UNIT
inn	Supply current from V	No load,	V _{DD} = 5 V,	$V_{SS} = -5 V$		115	200	
IDD Supply of	Supply current norm vDD	All inputs at 2 V or 0.8 V	V _{DD} = 12 V,	$V_{SS} = -12 V$		115	200	μΑ
	les Supply surrent from Van	No load,	V _{DD} = 5 V,	$V_{SS} = -5 V$		-115	-200	
ISS	Supply current from VSS	All inputs at 2 V or 0.8 V	V _{DD} = 12 V,	$V_{SS} = -12 V$		-115	-200	μA
	Supply current from V_{CC}	No load	V _{DD} = 5 V,	$V_{SS} = -5 V$			750	μA
lcc		All inputs at 0 or 5 V	V _{DD} = 12 V,	$V_{SS} = -12 V$			750	μΑ



SLLS065F - AUGUST 1989 - REVISED JANUARY 2000

DRIVER SECTION

electrical characteristics over operating free-air temperature range, V_{DD} = 12 V, V_{SS} = –12 V, V_{CC} = 5 V $\pm 10\%$ (unless otherwise noted)

	PARAMETER		TEST C	ONDITIONS		MIN	TYP†	MAX	UNIT
Vall	High-level output voltage	VIL = 0.8 V,	RL = 3 kΩ,	V _{DD} = 5 V,	$V_{SS} = -5 V$	4	4.5		V
VOH	ngir-ievel output voltage	See Figure 1		V _{DD} = 12 V	$V_{SS} = -12 V$	10	10.8		v
Vei	Low-level output voltage	VIH = 0.8 V,	$R_L = 3 k\Omega$,	V _{DD} = 5 V,	$V_{SS} = -5 V$		-4.4	-4	V
VOL	(see Note 3)	See Figure 1		V _{DD} = 12 V	$V_{SS} = -12 V$		-10.7	-10	v
Iн	High-level input current	V _I = 5 V, See Figure 2						1	μΑ
۱ _{IL}	Low-level input current	V _I = 0, See Figure 2						-1	μΑ
IOS(H)	High-level short-circuit output current (see Note 4)	V _I = 0.8 V, See Flgure 1	· · · · · · · · · · · · · · · · · · ·					-19.5	mA
IOS(L)	Low-level short-circuit output current (see Note 4)	V _I = 2 V, See Figure 1						19.5	mA
r _o	Output resistance	V _{DD} = V _{SS} = See Note 5	V _{CC} = 0,	$V_{O} = -2 V to$	2 V,	300	400		Ω

[†] All typical values are at $T_A = 25 \degree C$.

NOTES: 3. The algebraic convention, where the more positive (less negative) limit is designated as maximum, is used in this data sheet for logic levels only, e.g., if -10 V is a maximum, the typical value is a more negative voltage.

4. Not more than one output should be shorted at one time.

5. Test conditions are those specified by TIA/EIA-232-F.

switching characteristics, V_{DD} = 12 V, V_{SS} = –12 V, V_{CC} = 5 V $\pm 10\%,$ T_A = 25°C (unless otherwise noted) (see Figure 3)

	PARAMETER	TEST CONE	DITIONS	MIN	TYP	MAX	UNIT
^t PLH	Propagation delay time, low- to high-level output (see Note 6)				1.2	3	μs
^t PHL	Propagation delay time, high- to low-level output (see Note 6)	$R_L = 3 k\Omega \text{ to } 7 k\Omega,$	C _L = 15 pF		2.5	3.5	μs
^t TLH	Transition time, low- to high-level output]		0.53	2	3.2	μs
t _{THL}	Transition time, high- to low-level output			0.53	2	3.2	μs
t _{TLH}	Transition time, low- to high-level output (see Note 7)	$R_{I} = 3 k\Omega \text{ to } 7 k\Omega,$	$C_{1} = 2500 \text{ pE}$		1		μs
^t THL	Transition time, high- to low-level output (see Note 7)	$K_{L} = 5 K_{22} 10 7 K_{22}$	CL = 2500 pF		1		μs
SR	Output slew rate (see Note 7)	$R_L = 3 k\Omega$ to 7 k Ω ,	C _L = 15 pF	4	10	30	V/µs

NOTES: 6. tpHL and tpLH include the additional time due to on-chip slew rate and are measured at the 50% points.

 Measured between 3-V and –3-V points of output waveform TIA/EIA-232-F conditions), and all unused inputs are tied either high or low.



SLLS065F - AUGUST 1989 - REVISED JANUARY 2000

RECEIVER SECTION

electrical characteristics over operating free-air temperature range, V_{DD} = 12 V, V_{SS} = –12 V, V_{CC} = 5 V $\pm 10\%$ (unless otherwise noted)

	PARAMETER		TEST COND	ITIONS	MIN	TYP†	MAX	UNIT	
V _{IT+}	Positive-going input threshhold voltage	See Figure 5			1.6	2.1	2.55	V	
V _{IT} –	Negative-going input threshhold voltage	See Figure 5			0.65	1	1.25	V	
V _{hys}	Input hysteresis voltage (V _{IT +} - V _{IT} _)				600	1100		mV	
		V _I = 0.75 V,	$I_{OH} = -20 \ \mu A$,	See Figure 5 and Note 8	3.5				
V	High-level output voltage	VI = 0.75 V,	V _{CC} = 4.5 V		2.8	4.4		V	
Vон		$I_{OH} = -1 \text{ mA},$	$V_{CC} = 5 V$		3.8	4.9		, i	
		See Figure 5	V _{CC} = 5.5 V	4.3	5.4				
VOL	Low-level output voltage	V _I = 3 V,	I _{OL} = 3.2 mA,	See Figure 5		0.17	0.4	V	
	High-level input current	V _I = 3 V			0.43	0.55	1	m A	
ΙΗ	High-level input current	V _I = 25 V	3.6	4.6	8.3	mA			
		$V_{I} = -3 V$			-0.43	-0.55	-1	~	
ΗL	Low-level input current	V _I = -25 V -3.6 -					-8.3	mA	
IOS(H)	Short-circuit output at high level	V _I = 0.75 V,	$V_{O} = 0,$	See Figure 4		-8	-15	mA	
IOS(L)	Short-circuit output at low level	$V_{I} = V_{CC},$	$V_{O} = V_{CC},$	See Figure 4		13	25	mA	

[†] All typical values are at $T_A = 25 \,^{\circ}C$.

NOTE 8: If the inputs are left unconnected, the receiver interprets this as an input low, and the receiver outputs remain in the high state.

switching characteristics, V_{DD} = 12 V, V_{SS} = –12 V, V_{CC} = 5 V $\pm 10\%,$ T_A = 25°C (unless otherwise noted) (see Figure 6)

	PARAMETER	TEST CC	ONDITIONS	MIN	TYP	MAX	UNIT
^t PLH	Propagation delay time, low- to high-level output				3	4	μs
^t PHL	Propagation delay time, high- to low-level output	$P_{1} = 5 kO$	C _I = 50 pF		3	4	μs
t _{TLH}	Transition time, low- to high-level output	$R_L = 5 \text{ k}\Omega, C_L = 50 \text{ pF}$			300	450	ns
^t THL	Transition time, high- to low-level output				100	300	ns
^t w(N)	Duration of longest pulse rejected as noise (see Note 9)	$R_L = 5 k\Omega$,	C _L = 50 pF	1		4	μs

NOTE 9: The receiver ignores any postive- or negative-going pulse that is less than the minimum value of $t_{W(N)}$ and accepts any positive- or negative-going pulse greater than the maximum of $t_{W(N)}$.



SLLS065F - AUGUST 1989 - REVISED JANUARY 2000

PARAMETER MEASUREMENT INFORMATION

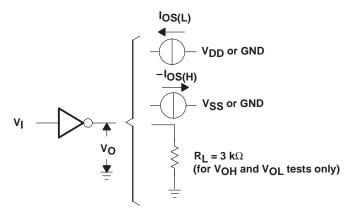


Figure 1. Driver Test Circuit for V_{OH} , V_{OL} , $I_{OS(H)}$, and $I_{OS(L)}$

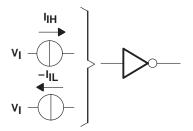


Figure 2. Driver Test Circuit for IIH and IIL

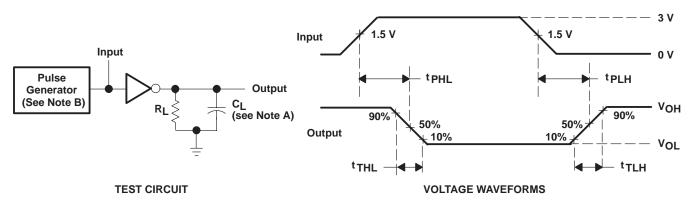




Figure 3. Driver Test Circuit and Voltage Waveforms



SLLS065F – AUGUST 1989 – REVISED JANUARY 2000

PARAMETER MEASUREMENT INFORMATION

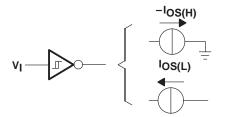


Figure 4. Receiver Test Circuit for IOS(H) and IOS(L)

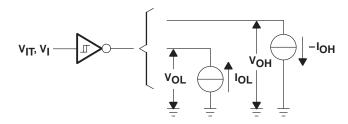
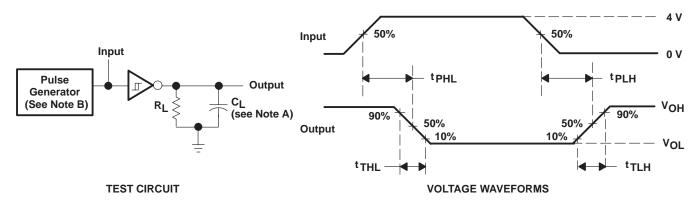
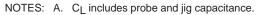


Figure 5. Receiver Test Circuit for VIT, VOH, and VOL



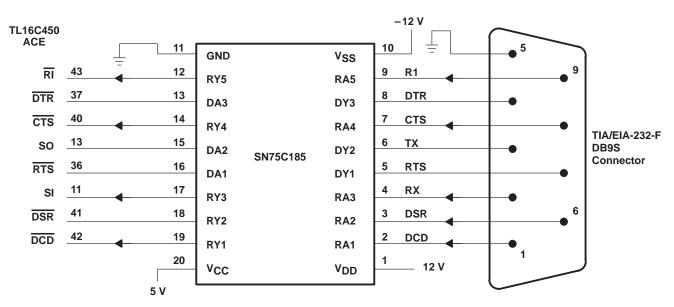


B. The pulse generator has the following characteristics: t_W = 25 µs, PRR = 20 kHz, Z_O = 50 Ω, t_f = t_f < 50 ns.

Figure 6. Receiver Propagation and Transition Times



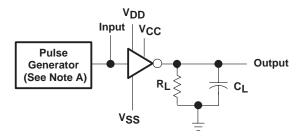
SLLS065F - AUGUST 1989 - REVISED JANUARY 2000



APPLICATION INFORMATION



The SN75C185 supports data rates up to 120 kbit/s over a 3-meter cable. Laboratory experiments show that, with C_L = 500 pF and R_L = 3 k Ω (minimum RS-232 input resistance load), the device can support this data rate. The 500-pF load approximates a typical 3-meter cable because the maximum RS-232 specification is 2500 pF (or about 15 meters). Figure 8 shows the test circuit used. Temperature was varied from 0°C to 70°C for the experiment.



NOTES: A. The pulse generator has the following characteristics: PRR = 60 kHz (120 kbit/s), $Z_O = 50 \Omega$. B. $V_{CC} = 5 V$, $V_{DD} = 12 V$, $V_{SS} = -12 V$.

Figure 8. Data-Rate Test Circuit



PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	e Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
SN75C185DW	ACTIVE	SOIC	DW	20	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN75C185DWE4	ACTIVE	SOIC	DW	20	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN75C185DWG4	ACTIVE	SOIC	DW	20	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN75C185DWR	ACTIVE	SOIC	DW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN75C185DWRE4	ACTIVE	SOIC	DW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN75C185DWRG4	ACTIVE	SOIC	DW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
SN75C185N	ACTIVE	PDIP	N	20	20	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type
SN75C185NE4	ACTIVE	PDIP	Ν	20	20	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check http://www.ti.com/productcontent for the latest availability information and additional product content details. TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

Important Information and Disclaimer:The information provided on this page represents TI's knowledge and belief as of the date that it is provided. TI bases its knowledge and belief on information provided by third parties, and makes no representation or warranty as to the accuracy of such information. Efforts are underway to better integrate information from third parties. TI has taken and continues to take reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.

In no event shall TI's liability arising out of such information exceed the total purchase price of the TI part(s) at issue in this document sold by TI to Customer on an annual basis.

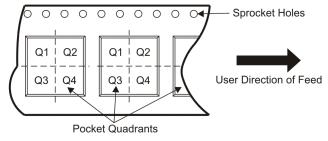
TEXAS INSTRUMENTS www.ti.com

TAPE AND REEL INFORMATION





QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



*All dimensions are nominal	
-----------------------------	--

Device		Package Drawing			Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN75C185DWR	SOIC	DW	20	2000	330.0	24.4	10.8	13.1	2.65	12.0	24.0	Q1



PACKAGE MATERIALS INFORMATION

11-Mar-2008



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN75C185DWR	SOIC	DW	20	2000	346.0	346.0	41.0

N (R-PDIP-T**)

PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN



NOTES:

- A. All linear dimensions are in inches (millimeters).B. This drawing is subject to change without notice.
- Falls within JEDEC MS-001, except 18 and 20 pin minimum body length (Dim A).
- \triangle The 20 pin end lead shoulder width is a vendor option, either half or full width.



DW (R-PDSO-G20)

PLASTIC SMALL OUTLINE



NOTES: A. All linear dimensions are in inches (millimeters). Dimensioning and tolerancing per ASME Y14.5M-1994.

B. This drawing is subject to change without notice.

C. Body dimensions do not include mold flash or protrusion not to exceed 0.006 (0,15).

D. Falls within JEDEC MS-013 variation AC.



LAND PATTERN DATA



NOTES:

- A. All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Refer to IPC7351 for alternate board design.
- D. Laser cutting apertures with trapezoidal walls and also rounding corners will offer better paste release. Customers should contact their board assembly site for stencil design recommendations. Refer to IPC-7525
- E. Customers should contact their board fabrication site for solder mask tolerances between and around signal pads.



IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

TI products are not authorized for use in safety-critical applications (such as life support) where a failure of the TI product would reasonably be expected to cause severe personal injury or death, unless officers of the parties have executed an agreement specifically governing such use. Buyers represent that they have all necessary expertise in the safety and regulatory ramifications of their applications, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of TI products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by TI. Further, Buyers must fully indemnify TI and its representatives against any damages arising out of the use of TI products in such safety-critical applications.

TI products are neither designed nor intended for use in military/aerospace applications or environments unless the TI products are specifically designated by TI as military-grade or "enhanced plastic." Only products designated by TI as military-grade meet military specifications. Buyers acknowledge and agree that any such use of TI products which TI has not designated as military-grade is solely at the Buyer's risk, and that they are solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI products are neither designed nor intended for use in automotive applications or environments unless the specific TI products are designated by TI as compliant with ISO/TS 16949 requirements. Buyers acknowledge and agree that, if they use any non-designated products in automotive applications, TI will not be responsible for any failure to meet such requirements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

Products		Applications	
Audio	www.ti.com/audio	Automotive and Transportation	www.ti.com/automotive
Amplifiers	amplifier.ti.com	Communications and Telecom	www.ti.com/communications
Data Converters	dataconverter.ti.com	Computers and Peripherals	www.ti.com/computers
DLP® Products	www.dlp.com	Consumer Electronics	www.ti.com/consumer-apps
DSP	dsp.ti.com	Energy and Lighting	www.ti.com/energy
Clocks and Timers	www.ti.com/clocks	Industrial	www.ti.com/industrial
Interface	interface.ti.com	Medical	www.ti.com/medical
Logic	logic.ti.com	Security	www.ti.com/security
Power Mgmt	power.ti.com	Space, Avionics and Defense	www.ti.com/space-avionics-defense
Microcontrollers	microcontroller.ti.com	Video and Imaging	www.ti.com/video
RFID	www.ti-rfid.com		
OMAP Mobile Processors	www.ti.com/omap		
Wireless Connectivity	www.ti.com/wirelessconnectivity		
	TI 505 0		

TI E2E Community Home Page

e2e.ti.com

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265 Copyright © 2012, Texas Instruments Incorporated