

SN65C23243, SN75C23243 3-V TO 5.5-V DUAL RS-232 PORT

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- Single-Chip and Single-Supply Interface for Two IBM™ PC/AT Serial Ports
- Meet or Exceed the Requirements of TIA/EIA-232-F and ITU v.28 Standards
- Operate With 3-V to 5.5-V V_{CC} Supply
- Always-Active Noninverting Receiver Output ($\overline{ROUT2}$) Per Port
- Operate up to 250 kbit/s
- Low Standby Current . . . 1 μ A Typical
- External Capacitors . . . $4 \times 0.22 \mu$ F
- Accept 5-V Logic Input With 3.3-V Supply
- Allow for Flexible Power Down of Either Serial Port
- Serial-Mouse Driveability
- RS-232 Bus-Pin ESD Protection Exceeds ± 15 kV Using Human-Body Model (HBM)
- Applications
 - Battery-Powered Systems, Notebooks, Laptops, Palmtop PCs, and Hand-Held Equipment
- Package Options Include Plastic Shrink Small-Outline (DL) and Thin Shrink Small-Outline (DGG) Packages

description

The SN65C23243 and SN75C23243 consist of two ports, each containing three line drivers and five line receivers, and a dual charge-pump circuit with ± 15 -kV ESD protection pin to pin (serial-port connection pins, including GND). These devices meet the requirements of TIA/EIA-232-F and provide the electrical interface between an asynchronous communication controller and the serial-port connector. This combination of drivers and receivers matches that needed for two typical serial ports used in an IBM PC/AT, or compatible. The charge pump and four small external capacitors allow operation from a single 3-V to 5.5-V supply. In addition, these devices include an always-active noninverting output ($\overline{ROUT2}$) per port, which allows applications using the ring indicator to transmit data while the devices are powered down. The devices operate at data signaling rates up to 250 kbit/s, and a maximum of 30-V/ μ s driver output slew-rate.

Flexible control options for power management are available when either or both serial ports are inactive. The auto-powerdown feature functions when $\overline{FORCEON}$ is low and $\overline{FORCEOFF}$ is high. During this mode of operation, if the device does not sense a valid RS-232 signal, the driver outputs of its respective port are disabled. If $\overline{FORCEOFF}$ is set low, both drivers and receivers (except $\overline{ROUT2}$) are shut off, and the supply current is reduced to 1 μ A. Disconnecting the serial port or turning off the peripheral drivers causes the auto-powerdown condition to occur.

DGG OR DL PACKAGE
(TOP VIEW)

RIN5A	1	48	ROUT5A
RIN4A	2	47	ROUT4A
RIN3A	3	46	ROUT3A
RIN2A	4	45	ROUT2A
RIN1A	5	44	ROUT1A
INVA	6	43	ROUT2A
DOUT3A	7	42	DIN3A
DOUT2A	8	41	DIN2A
DOUT1A	9	40	DIN1A
FORCEOFFA	10	39	FORCEON
C2–	11	38	V–
C2+	12	37	V+
GND	13	36	C1+
V_{CC}	14	35	C1–
FORCEOFFB	15	34	GND
DOUT1B	16	33	DIN1B
DOUT2B	17	32	DIN2B
DOUT3B	18	31	DIN3B
INVB	19	30	ROUT2B
RIN1B	20	29	ROUT1B
RIN2B	21	28	ROUT2B
RIN3B	22	27	ROUT3B
RIN4B	23	26	ROUT4B
RIN5B	24	25	ROUT5B



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description (continued)

Auto-powerdown can be disabled when FORCEON and FORCEOFF are high, and should be done when driving a serial mouse. With auto-powerdown enabled, the RS-232 port is activated automatically when a valid signal is applied to any respective receiver input. The INV output is used to notify the user if an RS-232 signal is present at any receiver input. INV is high (valid data) if any receiver input voltage is greater than 2.7 V or less than –2.7 V or has been between –0.3 V and 0.3 V for less than 30 μ s. INV is low (invalid data) if all receiver input voltages are between –0.3 V and 0.3 V for more than 30 μ s. Refer to Figure 5 for receiver input levels.

The SN75C23243 is characterized for operation from 0°C to 70°C. The SN65C23243 is characterized for operation from –40°C to 85°C.

AVAILABLE OPTIONS

T _A	PACKAGED DEVICES	
	SHRINK SMALL OUTLINE (DL)	THIN SHRINK SMALL OUTLINE (DGG)
0°C to 70°C	SN75C23243DL	SN75C23243DGG
–40°C to 85°C	SN65C23243DL	SN65C23243DGG

The DL and DGG packages are available taped and reeled. Add the suffix R to device type (e.g., SN75C23243DLR).

Function Tables

EACH DRIVER (each port)

INPUTS				OUTPUT DOUT	DRIVER STATUS
DIN	FORCEON	FORCEOFF	VALID RIN RS-232 LEVEL		
X	X	L	X	Z	Powered off
L	H	H	X	H	Normal operation with auto-powerdown disabled
H	H	H	X	L	
L	L	H	Yes	H	Normal operation with auto-powerdown enabled
H	L	H	Yes	L	
L	L	H	No	Z	Powered off by auto-powerdown feature
H	L	H	No	Z	

H = high level, L = low level, X = irrelevant, Z = high impedance

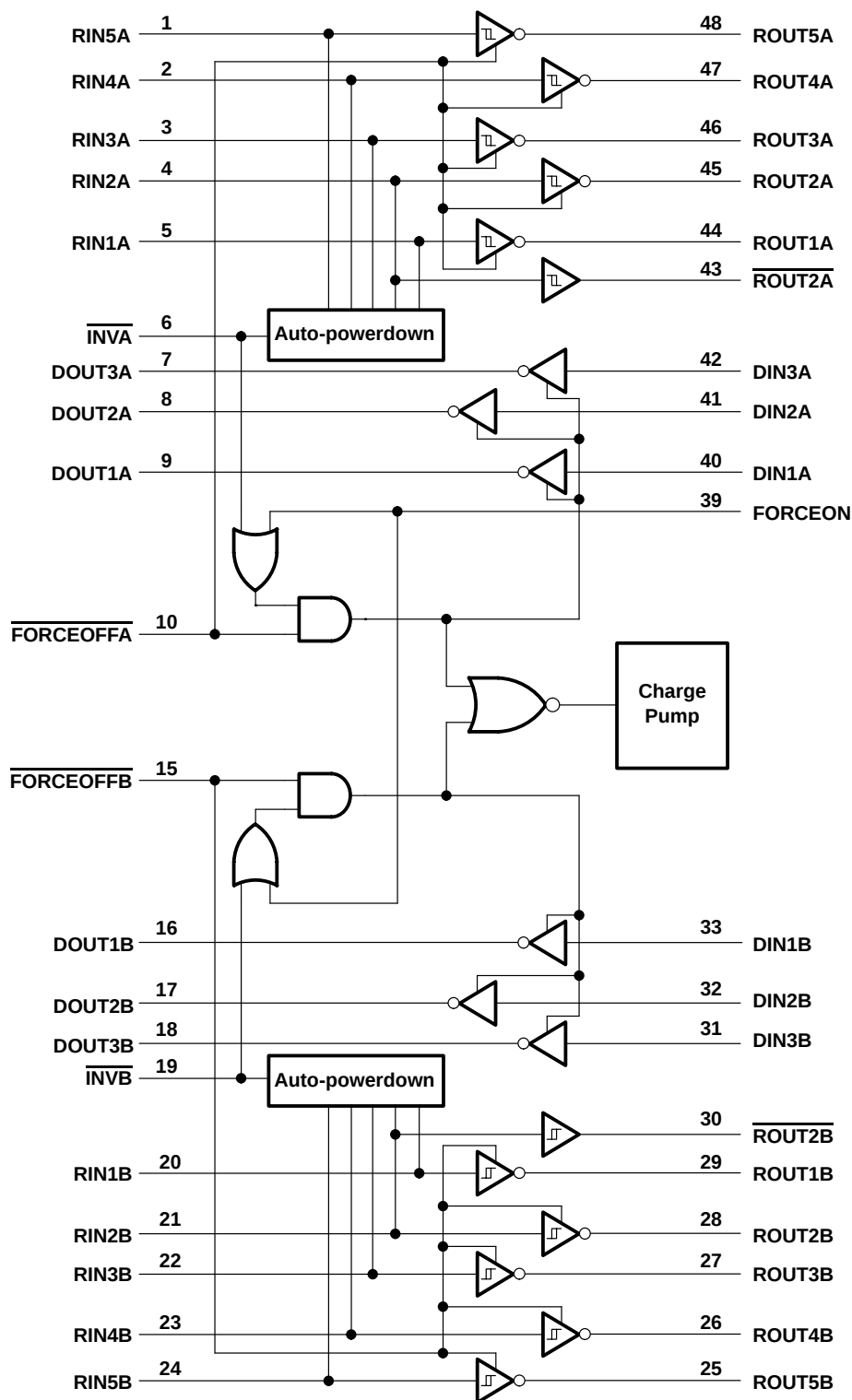
EACH RECEIVER (each port)

INPUTS				OUTPUTS		RECEIVER STATUS
RIN2	RIN1, RIN3–RIN5	FORCEOFF	VALID RIN RS-232 LEVEL	ROUT2	ROUT	
L	X	L	X	L	Z	Powered off while ROUT2 is active
H	X	L	X	H	Z	
L	L	H	Yes	L	H	Normal operation with auto-powerdown disabled/enabled
L	H	H	Yes	L	L	
H	L	H	Yes	H	H	
H	H	H	Yes	H	L	
Open	Open	H	No	L	H	

H = high level, L = low level, X = irrelevant, Z = high impedance (off), Open = input disconnected or connected driver off



logic diagram (positive logic)

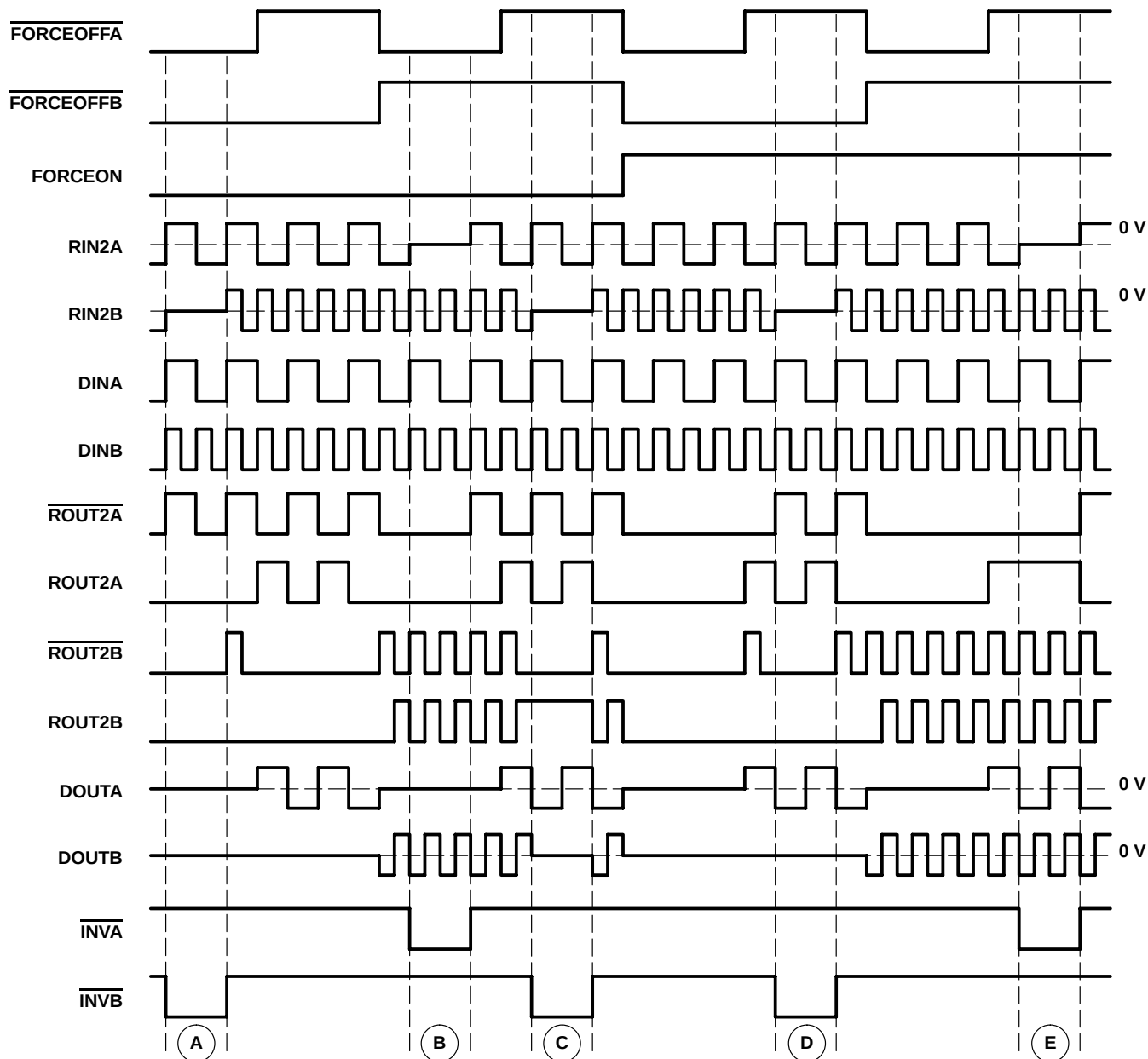


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timing

Figure 1 shows how the two independent serial ports can be enabled or disabled. As shown by the logic states, depending on the $\overline{\text{FORCEOFF}}$, FORCEON , and receiver input levels, either port can be powered down. Intermediate receiver input levels indicate a 0-V input. Also, it is assumed a pull-down resistor to ground is used for the receiver outputs. The $\overline{\text{INV}}$ pin goes low when its respective receiver input does not supply a valid RS-232 level. For simplicity, voltage levels, timing differences, and input/output edge rates are not shown.



- NOTES: A. Ports A and B manually powered off
 B. Port A manually powered off, port B in normal operation with auto-powerdown enabled
 C. Port B powered off by auto-powerdown, port A in normal operation with auto-powerdown enabled
 D. Port A in normal operation with auto-powerdown disabled, port B manually powered off
 E. Ports A and B in normal operation with auto-powerdown disabled

Figure 1. Timing Diagram

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

Supply voltage range, V_{CC} (see Note 1)	–0.3 V to 6 V
Positive output supply voltage range, $V+$ (see Note 1)	–0.3 V to 7 V
Negative output supply voltage, $V-$ (see Note 1)	0.3 V to –7 V
Supply voltage difference, $V+ - V-$ (see Note 1)	13 V
Input voltage range, V_I : Driver ($\overline{\text{FORCEOFF}}$, FORCEON)	–0.3 V to 6 V
Receiver	–25 V to 25 V
Output voltage range, V_O : Driver	–13.2 V to 13.2 V
Receiver (INV)	–0.3 V to $V_{CC} + 0.3$ V
Package thermal impedance, θ_{JA} (see Note 2): DGG package	70°C/W
DL package	63°C/W
Lead temperature 1,6 mm (1/16 inch) from case for 10 seconds	260°C
Storage temperature range, T_{stg}	–65°C to 150°C

[†] 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 51-7.

recommended operating conditions (see Note 3 and Figure 7)

		MIN	NOM	MAX	UNIT
Supply voltage	$V_{CC} = 3.3$ V	3	3.3	3.6	V
	$V_{CC} = 5$ V	4.5	5	5.5	
Driver and control high-level input voltage, V_{IH}	$\text{DIN}, \overline{\text{FORCEOFF}}, \text{FORCEON}$	$V_{CC} = 3.3$ V	2		V
		$V_{CC} = 5$ V	2.4		
Driver and control low-level input voltage, V_{IL}	$\text{DIN}, \overline{\text{FORCEOFF}}, \text{FORCEON}$			0.8	V
Driver and control input voltage, V_I	$\text{DIN}, \overline{\text{FORCEOFF}}, \text{FORCEON}$	0		5.5	V
Receiver input voltage, V_I	RIN	–25		25	V
Operating free-air temperature, T_A	SN75C23243	0		70	°C
	SN65C23243	–40		85	

NOTE 3: Test conditions are $C1-C4 = 0.22 \mu\text{F}$ at $V_{CC} = 3.3 \text{ V} \pm 0.3 \text{ V}$; $C1 = 0.047 \mu\text{F}$, $C2-C4 = 0.33 \mu\text{F}$ at $V_{CC} = 5 \text{ V} \pm 0.5 \text{ V}$.

electrical characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted) (see Note 3 and Figure 7)

PARAMETER		TEST CONDITIONS	MIN	TYP [‡]	MAX	UNIT
I_I	Input leakage current	$\overline{\text{FORCEOFF}}, \text{FORCEON}$		± 0.01	± 1	μA
I_{CC}	Supply current ($T_A = 25^\circ\text{C}$)	Auto-powerdown disabled	No load, $\overline{\text{FORCEOFF}}$ and FORCEON at V_{CC}	0.6	2	μA
		Powered off	No load, $\overline{\text{FORCEOFF}}$ at GND	1	20	
		Auto-powerdown enabled	No load, $\overline{\text{FORCEOFF}}$ at V_{CC} , FORCEON at GND, All RIN are open or grounded	1	20	

[‡] All typical values are at $V_{CC} = 3.3 \text{ V}$ or $V_{CC} = 5 \text{ V}$ and $T_A = 25^\circ\text{C}$.

NOTE 3: Test conditions are $C1-C4 = 0.22 \mu\text{F}$ at $V_{CC} = 3.3 \text{ V} \pm 0.3 \text{ V}$; $C1 = 0.047 \mu\text{F}$, $C2-C4 = 0.33 \mu\text{F}$ at $V_{CC} = 5 \text{ V} \pm 0.5 \text{ V}$.

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DRIVER SECTION

electrical characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted) (see Note 3 and Figure 7)

PARAMETER	TEST CONDITIONS	MIN	TYP [†]	MAX	UNIT
V _{OH} High-level output voltage	All DOUT at R _L = 3 kΩ to GND	5	5.4		V
V _{OL} Low-level output voltage	All DOUT at R _L = 3 kΩ to GND	–5	–5.4		V
V _O Output voltage (mouse driveability)	DIN1 = DIN2 = GND, DIN3 = V _{CC} , 3-kΩ to GND at DOUT3, DOUT1 = DOUT2 = –2.5 mA	±5			V
I _{IH} High-level input current	V _I = V _{CC}		±0.01	±1	μA
I _{IL} Low-level input current	V _I at GND		±0.01	±1	μA
I _{OS} Short-circuit output current [‡]	V _{CC} = 3.6 V, V _O = 0 V		±35	±60	mA
	V _{CC} = 5.5 V, V _O = 0 V				
r _o Output resistance	V _{CC} , V+, and V– = 0 V, V _O = ±2 V	300	10M		Ω
I _{off} Output leakage current	FORCEOFF = GND, V _O = ±12 V, V _{CC} = 0 to 5.5 V			±25	μA

[†] All typical values are at V_{CC} = 3.3 V or V_{CC} = 5 V and T_A = 25°C.

[‡] Short-circuit durations should be controlled to prevent exceeding the device absolute power dissipation ratings, and not more than one output should be shorted at a time.

NOTE 3: Test conditions are C1–C4 = 0.22 μF at V_{CC} = 3.3 V ± 0.3 V; C1 = 0.047 μF, C2–C4 = 0.33 μF at V_{CC} = 5 V ± 0.5 V.

switching characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted) (see Note 3 and Figure 7)

PARAMETER	TEST CONDITIONS	MIN	TYP [†]	MAX	UNIT
Maximum data rate	C _L = 1000 pF, R _L = 3 kΩ, One DOUT switching, See Figure 1	250			kbit/s
t _{sk(p)} Pulse skew [§]	C _L = 150 pF to 2500 pF, R _L = 3 kΩ to 7 kΩ, See Figure 2		100		ns
SR(tr) Slew rate, transition region (see Figure 1)	V _{CC} = 3.3 V, R _L = 3 kΩ to 7 kΩ	C _L = 150 pF to 1000 pF	6	30	V/μs
		C _L = 150 pF to 2500 pF	4	30	

[†] All typical values are at V_{CC} = 3.3 V or V_{CC} = 5 V and T_A = 25°C.

[§] Pulse skew is defined as |t_{PLH} – t_{PHL}| of each channel of the same device.

NOTE 3: Test conditions are C1–C4 = 0.22 μF at V_{CC} = 3.3 V ± 0.3 V; C1 = 0.047 μF, C2–C4 = 0.33 μF at V_{CC} = 5 V ± 0.5 V.



RECEIVER SECTION

electrical characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted) (see Note 3 and Figure 7)

PARAMETER	TEST CONDITIONS	MIN	TYP [†]	MAX	UNIT
V _{OH} High-level output voltage	I _{OH} = -1 mA	V _{CC} - 0.6 V	V _{CC} - 0.1 V		V
V _{OL} Low-level output voltage	I _{OL} = 1.6 mA			0.4	V
V _{IT+} Positive-going input threshold voltage	V _{CC} = 3.3 V		1.6	2.4	V
	V _{CC} = 5 V		1.9	2.4	
V _{IT-} Negative-going input threshold voltage	V _{CC} = 3.3 V	0.6	1.1		V
	V _{CC} = 5 V	0.8	1.4		
V _{hys} Input hysteresis (V _{IT+} - V _{IT-})			0.5		V
I _{off} Output leakage current (except ROUT2B)	FORCEOFF = 0 V		±0.05	±10	μA
r _i Input resistance	V _I = ±3 V to ±25 V	3	5	7	kΩ

[†] All typical values are at V_{CC} = 3.3 V or V_{CC} = 5 V and T_A = 25°C.

NOTE 3: Test conditions are C1–C4 = 0.22 μF at V_{CC} = 3.3 V ± 0.3 V; C1 = 0.047 μF, C2–C4 = 0.33 μF at V_{CC} = 5 V ± 0.5 V.

switching characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted) (see Note 3 and Figure 7)

PARAMETER	TEST CONDITIONS	MIN	TYP [†]	MAX	UNIT
t _{PLH} Propagation delay time, low- to high-level output	C _L = 150 pF, See Figure 4		150		ns
t _{PHL} Propagation delay time, high- to low-level output			150		ns
t _{en} Output enable time	C _L = 150 pF, R _L = 3 kΩ, See Figure 5		200		ns
t _{dis} Output disable time			200		ns
t _{sk(p)} Pulse skew [‡]	See Figure 4		50		ns

[†] All typical values are at V_{CC} = 3.3 V or V_{CC} = 5 V and T_A = 25°C.

[‡] Pulse skew is defined as |t_{PLH} - t_{PHL}| of each channel of the same device.

NOTE 3: Test conditions are C1–C4 = 0.22 μF at V_{CC} = 3.3 V ± 0.3 V; C1 = 0.047 μF, C2–C4 = 0.33 μF at V_{CC} = 5 V ± 0.5 V.

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AUTO-POWERDOWN SECTION

electrical characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted) (see Figure 6)

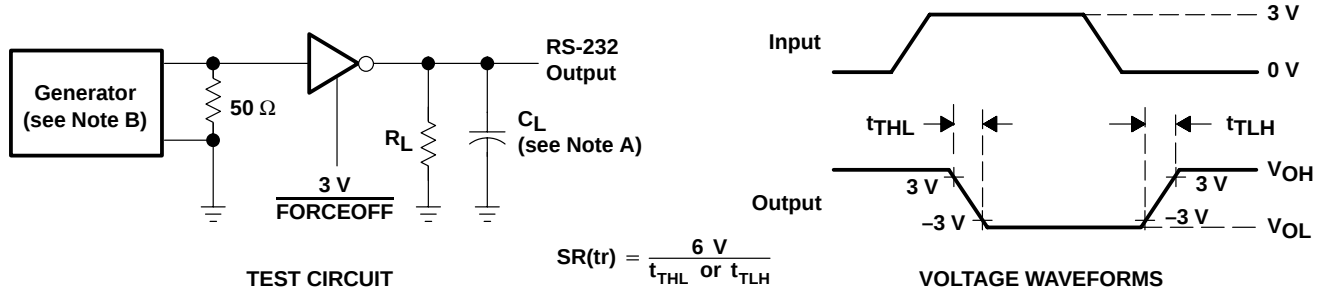
PARAMETER		TEST CONDITIONS	MIN	MAX	UNIT
$V_{T+}(\text{valid})$	Receiver input threshold for INV high-level output voltage	FORCEON = GND, FORCEOFF = V_{CC}		2.7	V
$V_{T-}(\text{valid})$	Receiver input threshold for INV high-level output voltage	FORCEON = GND, FORCEOFF = V_{CC}	-2.7		V
$V_{T}(\text{invalid})$	Receiver input threshold for INV low-level output voltage	FORCEON = GND, FORCEOFF = V_{CC}	-0.3	0.3	V
V_{OH}	INV high-level output voltage	$I_{OH} = -1 \text{ mA}$, FORCEON = GND, FORCEOFF = V_{CC}	$V_{CC} - 0.6$		V
V_{OL}	INV low-level output voltage	$I_{OL} = 1.6 \text{ mA}$, FORCEON = GND, FORCEOFF = V_{CC}		0.4	V

switching characteristics over recommended ranges of supply voltage and operating free-air temperature (unless otherwise noted) (see Figure 6)

PARAMETER		MIN	TYP [†]	MAX	UNIT
t_{valid}	Propagation delay time, low- to high-level output		1		μs
t_{invalid}	Propagation delay time, high- to low-level output		30		μs
t_{en}	Supply enable time		100		μs

[†] All typical values are at $V_{CC} = 3.3 \text{ V}$ or $V_{CC} = 5 \text{ V}$ and $T_A = 25^\circ\text{C}$.

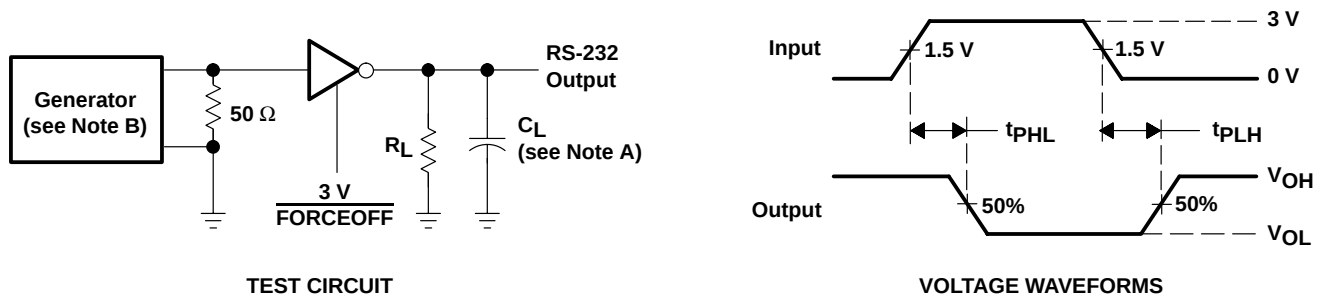
PARAMETER MEASUREMENT INFORMATION



NOTES: F. C_L includes probe and jig capacitance.

G. The pulse generator has the following characteristics: PRR = 250 kbit/s, $Z_O = 50 \Omega$, 50% duty cycle, $t_r \leq 10 \text{ ns}$, $t_f \leq 10 \text{ ns}$.

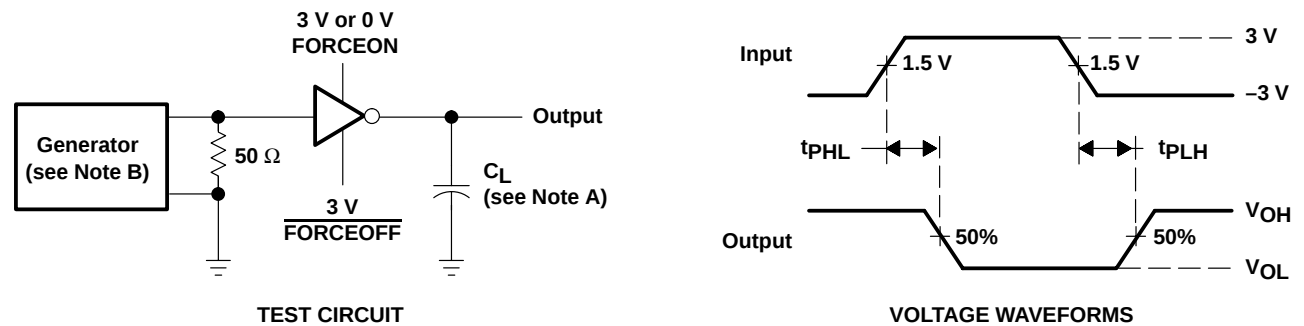
Figure 2. Driver Slew Rate



NOTES: A. C_L includes probe and jig capacitance.

B. The pulse generator has the following characteristics: PRR = 250 kbit/s, $Z_O = 50 \Omega$, 50% duty cycle, $t_r \leq 10 \text{ ns}$, $t_f \leq 10 \text{ ns}$.

Figure 3. Driver Pulse Skew



NOTES: A. C_L includes probe and jig capacitance.

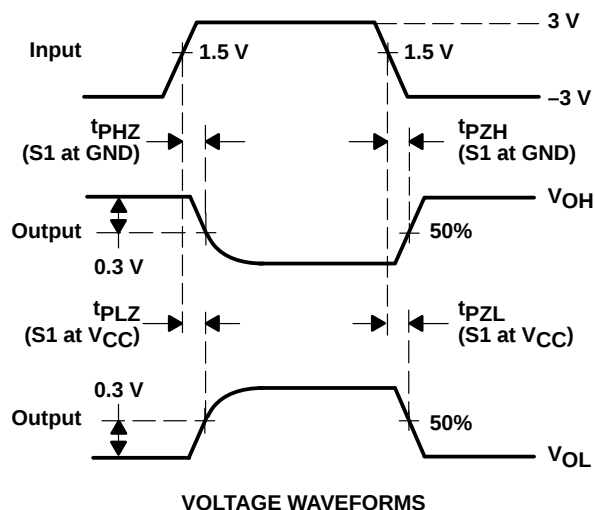
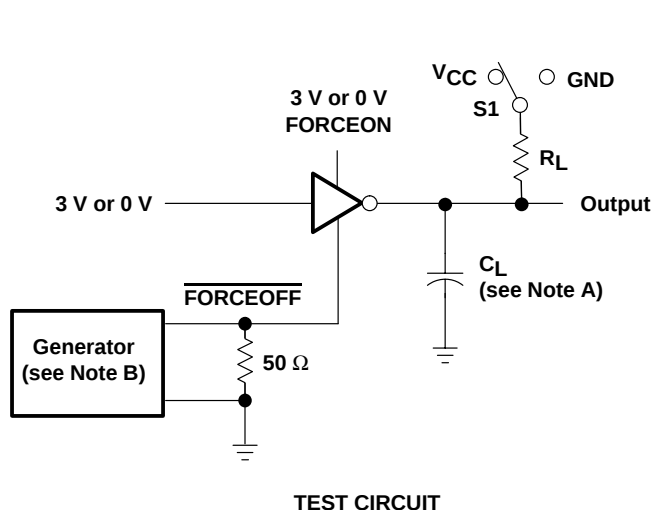
B. The pulse generator has the following characteristics: $Z_O = 50 \Omega$, 50% duty cycle, $t_r \leq 10 \text{ ns}$, $t_f \leq 10 \text{ ns}$.

Figure 4. Receiver Propagation Delay Times

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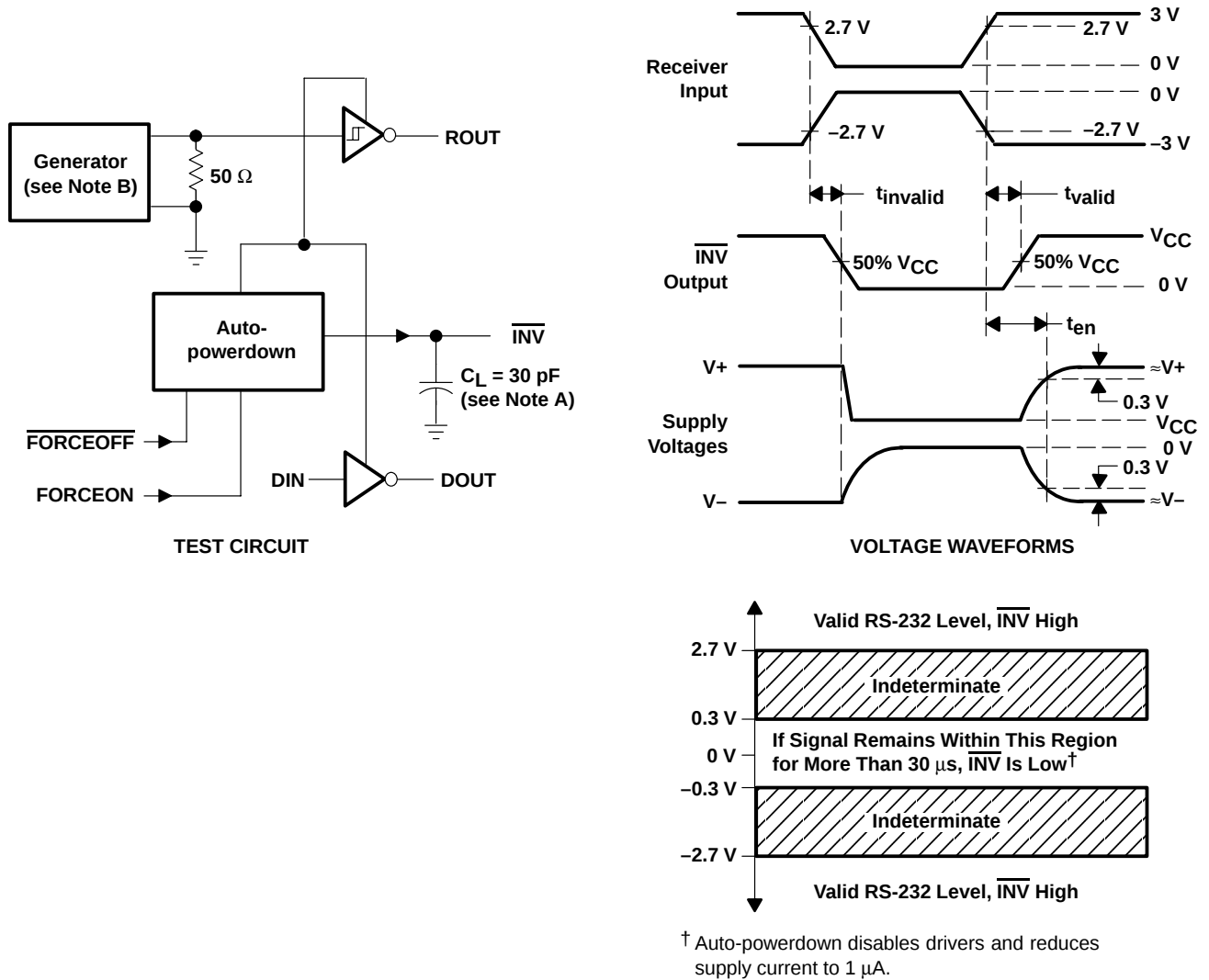
PARAMETER MEASUREMENT INFORMATION



- NOTES: A. C_L includes probe and jig capacitance.
 B. The pulse generator has the following characteristics: $Z_O = 50\ \Omega$, 50% duty cycle, $t_r \leq 10\ \text{ns}$, $t_f \leq 10\ \text{ns}$.
 C. t_{PLZ} and t_{PHZ} are the same as t_{dis} .
 D. t_{PZL} and t_{PZH} are the same as t_{en} .

Figure 5. Receiver Enable and Disable Times

PARAMETER MEASUREMENT INFORMATION



NOTES: A. C_L includes probe and jig capacitance.

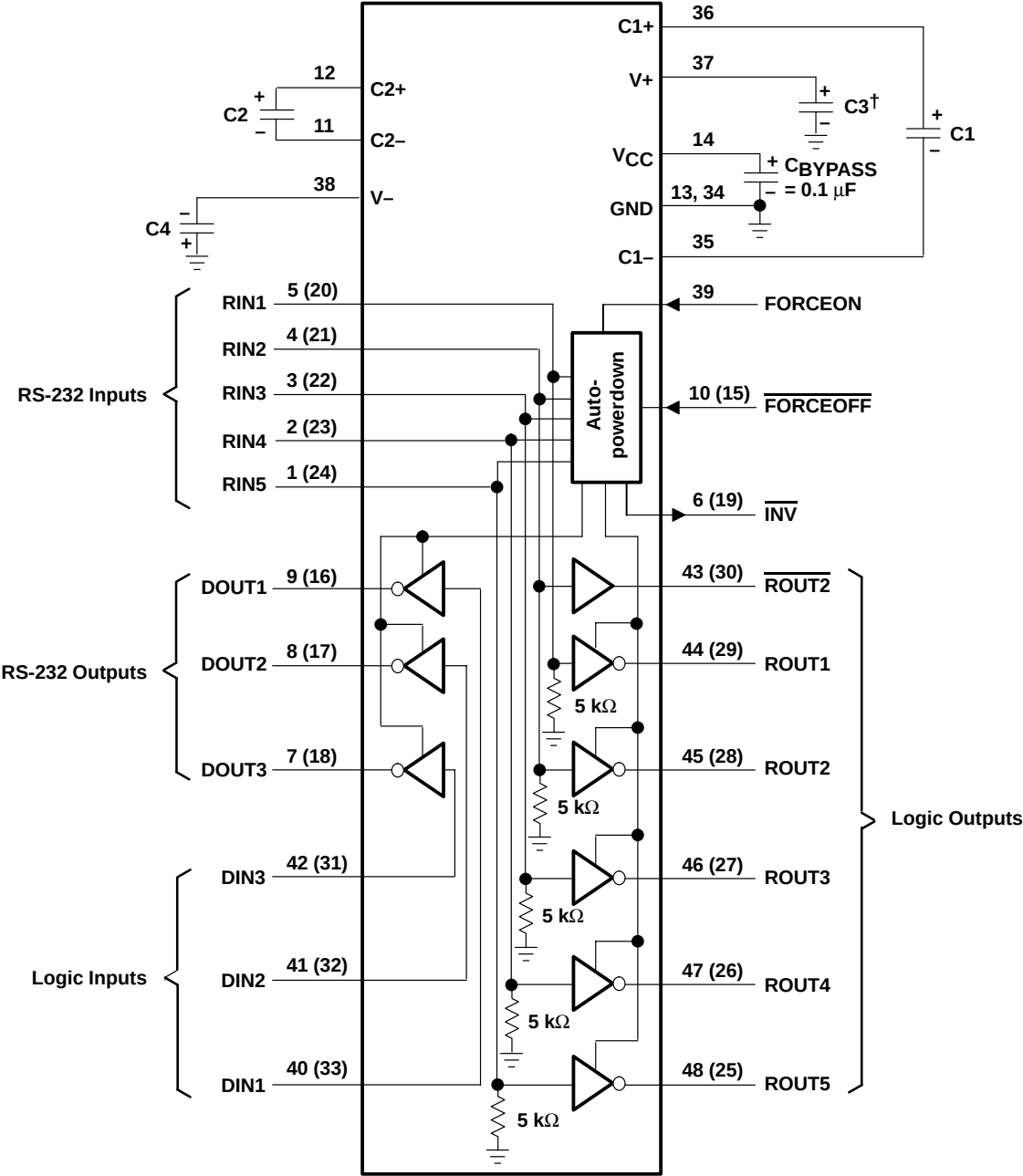
B. The pulse generator has the following characteristics: PRR = 5 kbit/s, $Z_O = 50 \Omega$, 50% duty cycle, $t_r \leq 10$ ns, $t_f \leq 10$ ns.

Figure 6. $\overline{INV}$ Propagation Delay Times and Supply Enabling Time

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APPLICATION INFORMATION



† C3 can be connected to VCC or GND.
NOTES: A. Resistor values shown are nominal.
B. Numbers in parentheses are for B section.

VCC vs CAPACITOR VALUES		
VCC	C1	C2, C3, and C4
3.3 V ± 0.3 V	0.22 μF	0.22 μF
5 V ± 0.5 V	0.047 μF	0.33 μF
3 V to 5.5 V	0.22 μF	1 μF

Figure 7. Typical Operating Circuit and Capacitor Values



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SN75C23243, 3-V to 5.5-V Dual RS-232 Port

DEVICE STATUS: **ACTIVE**

PARAMETER NAME	SN65C23243	SN75C23243
Drivers Per Package	6	6
Receivers Per Package	10	10
Supply Voltage(s) (V)	3.3, 5	3.3, 5
Driver tpd (ns)	150	150
Receiver tpd (ns)	150	150
ICC (max) (mA)	0.020	0.020

FEATURES
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- Single-Chip and Single-Supply Interface for Two IBM™ PC/AT Serial Port
- Meet or Exceed the Requirements of TIA/EIA-232-F and ITU v.28 Standards
- Operate With 3-V to 5.5-V V_{CC} Supply
- Always-Active Noninverting Receiver Output (ROUT2\) Per Port
- Operate up to 250 kbit/s
- Low Standby Current ...1 uA Typical
- External Capacitors ...4 × 0.22 uF
- Accept 5-V Logic Input With 3.3-V Supply
- Allow for Flexible Power Down of Either Serial Port
- Serial-Mouse Driveability
- RS-232 Bus-Pin ESD Protection Exceeds ±15 kV Using Human-Body Model (HBM)
- Applications
 - Battery-Powered Systems, Notebooks, Laptops, Palmtop PCs, and Hand-Held Equipment
- Package Options Include Plastic Shrink Small-Outline (DL) and Thin Shrink Small-Outline (DGG) Packages

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DESCRIPTION
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The SN65C23243 and SN75C23243 consist of two ports, each containing three line drivers and five line receivers, and a dual charge-pump circuit with ±15-kV ESD protection pin to pin (serial-port connection pins, including GND). These devices meet the requirements of TIA/EIA-232-F and provide the electrical interface between an asynchronous communication controller and the serial-port connector. This combination of drivers and receivers matches that needed for two typical serial ports used in an IBM PC/AT, or compatible. The charge pump and four small external capacitors allow operation from a single 3-V to 5.5-V supply. In addition, these devices include an always-active noninverting output (ROUT2\) per port, which allows applications using the ring indicator to transmit data while the devices are powered down. The devices operate at data signaling rates up to 250 kbit/s, and a maximum of 30-V/us driver output slew-rate.

Flexible control options for power management are available when either or both serial ports are inactive. The auto-powerdown feature functions when FORCEON is low and FORCEOFF\ is high. During this mode of operation, if the device does not sense a valid RS-232 signal, the driver outputs of its respective port are disabled. If FORCEOFF\ is set low, both drivers and receivers (except ROUT2\) are shut off, and the supply current is reduced to 1 uA. Disconnecting the serial port or turning off the peripheral drivers causes the auto-powerdown condition to occur.

Auto-powerdown can be disabled when FORCEON and FORCEOFF\ are high, and should be done when driving a serial mouse. With auto-powerdown enabled, the RS-232 port is activated automatically when a valid signal is applied to any respective receiver input. The INV\output is used to notify the user if an RS-232 signal is present at any receiver input. INV\ is high (valid data) if any receiver input voltage is greater than 2.7 V or less than -2.7 V or has been between -0.3 V and 0.3 V for less than 30 us. INV\ is low (invalid data) if all receiver input voltages are between -0.3 V and 0.3 V for more than 30 us. Refer to Figure 5 for receiver input levels.

The SN75C23243 is characterized for operation from 0°C to 70°C. The SN65C23243 is characterized for operation from -40°C to 85°C.

TECHNICAL RESOURCES

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To view the following documents, [Acrobat Reader 4.0](#) is required.
To download a document to your hard drive, right-click on the link and choose 'Save'.

DATASHEET

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Full datasheet in Acrobat PDF: [sn75c23243.pdf](#) (192 KB) (Updated: 08/03/2001)

APPLICATION NOTES

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- [Interface Circuits for TIA/EIA-232-F](#) (SLLA037 - Updated: 11/23/1998)
- [Live Insertion with Differential Interface Products](#) (SLLA107 - Updated: 01/28/2002)
- [Low-Voltage, Single-Supply 232-Standard Interface Solutions \(Rev. A\)](#) (SLLA083A - Updated: 09/19/2000)
- [Signaling Rate versus Transfer Rate](#) (SLLA098 - Updated: 03/01/2001)

RELATED DOCUMENTS

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- [Military Analog Selection Guide](#) (SGLB002, 318 KB - Updated: 11/09/2000)
- [Military Semiconductors Selection Guide 2002 \(Rev. B\)](#) (SGYC003B, 1648 KB - Updated: 04/22/2002)

SAMPLES

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ORDERABLE DEVICE	PACKAGE	PINS	TEMP (°C)	STATUS	SAMPLES
SN75C23243DGGR	DGG	48	0 TO 70	ACTIVE	Request Samples
SN75C23243DLR	DL	48	0 TO 70	ACTIVE	Request Samples

PRICING/AVAILABILITY/PKG

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ORDERABLE DEVICE	PACKAGE	PINS	TEMP (°C)	STATUS	BUDGETARY PRICE US\$/UNIT QTY=1000+	PACK QTY	PRICING/AVAILABILITY/PKG
SN75C23243DGGR	DGG	48	0 TO 70	ACTIVE	3.36	2000	Check stock or order
SN75C23243DL	DL	48	0 TO 70	ACTIVE	3.36	25	Check stock or order
SN75C23243DLR	DL	48	0 TO 70	ACTIVE	3.36	1000	Check stock or order

Table Data Updated on: 7/25/2002