

# Octal Bus Transceiver with 3-State Outputs

## FEATURES

- **Power-Supply Range:** 1.65V to 5.5V
- **V<sub>CC</sub> Isolation:** If V<sub>CC</sub> is at GND, Both Ports are in the High-Impedance State
- **I<sub>OFF</sub>:** Supports Partial-Power-Down Mode Operation
- **Extended Temperature:** -40°C to +125°C

## APPLICATIONS

- Handset
- Smartphone
- Tablet
- Desktop PC

## DESCRIPTION

The RS245 is designed for asynchronous communication between two data buses. The logic levels of the direction-control (DIR) input and the output-enable ( $\overline{OE}$ ) input activate either the B-port outputs or the A-port outputs or place both output ports into the high-impedance mode. The device transmits data from the A bus to the B bus when the B-port outputs are activated, and from the B bus to the A bus when the A-port outputs are activated. The input circuitry on both A and B ports is always active and must have a logic HIGH or LOW level applied to prevent excess I<sub>CC</sub> and I<sub>CCZ</sub>.

This device is fully specified for partial-power-down applications using I<sub>OFF</sub>. The I<sub>OFF</sub> circuitry disables the outputs, preventing damaging current backflow through the device when it is powered down.

The V<sub>CC</sub> isolation feature ensures that if either V<sub>CC</sub> input is at GND, all outputs are in the high-impedance state.

To ensure the high-impedance state during power up or power down,  $\overline{OE}$  should be tied to V<sub>CC</sub> through a pullup resistor, the minimum value of the resistor is determined by the current-sinking capability of the driver.

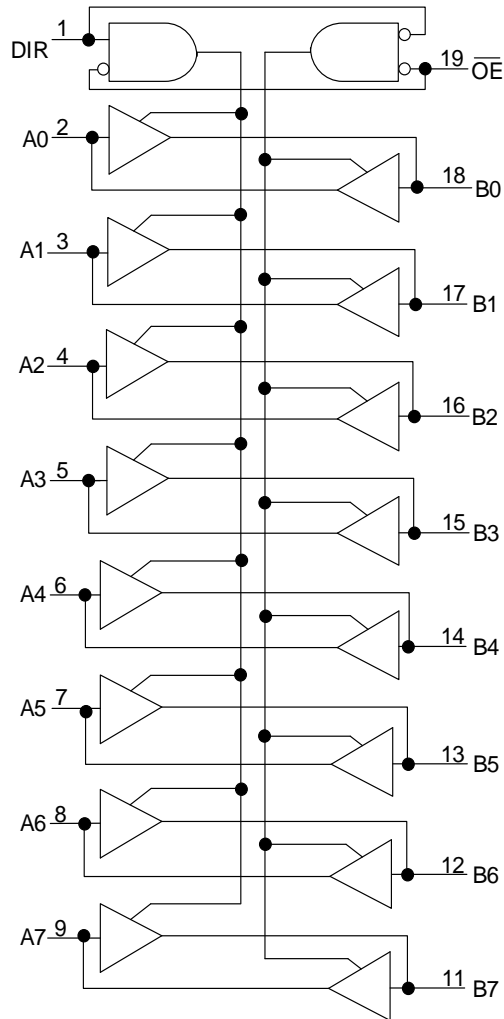
It operates over an ambient temperature range of -40°C to +125°C.

### Device Information <sup>(1)</sup>

| PART NUMBER | PACKAGE     | BODY SIZE (NOM) |
|-------------|-------------|-----------------|
| RS245       | TSSOP20(20) | 6.50mm×4.40mm   |
|             | SOP20(20)   | 12.80mm×7.50mm  |

(1) For all available packages, see the orderable addendum at the end of the data sheet.

## Functional Block Diagram



**Function Table**

| CONTROL INPUTS  |     | OUTPUT CIRCUITS |         | OPERATION       |
|-----------------|-----|-----------------|---------|-----------------|
| $\overline{OE}$ | DIR | A PORT          | B PORT  |                 |
| L               | L   | Enabled         | Hi-Z    | B data to A bus |
| L               | H   | Hi-Z            | Enabled | A data to B bus |
| H               | X   | Hi-Z            | Hi-Z    | Isolation       |

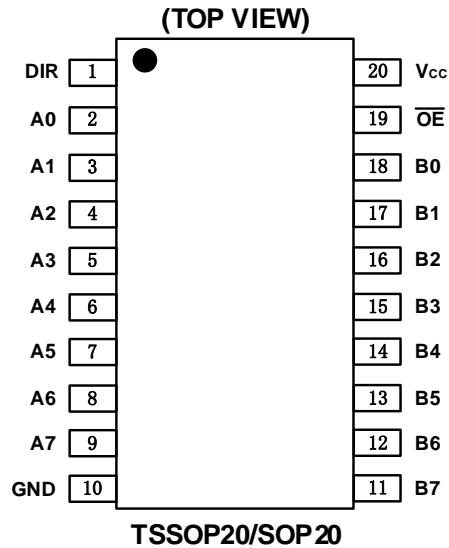
NOTE:  
H=HIGH voltage level  
L=LOW voltage level  
X=don't care  
Z=high impedance OFF-state

## Revision History

Note: Page numbers for previous revisions may differ from page numbers in the current version.

| VERSION | Change Date | Change Item  |
|---------|-------------|--|
| A.1     | 2021/02/26  | Initial version completed  |
| A.2     | 2021/08/18  | 1. Fix Switching Characteristics mistake in Page 9、10@A.1 Version.<br>2. Fix Application Information mistake in Page 13@A.1 Version. |

## PIN CONFIGURATIONS



## PIN DESCRIPTION

| PIN           | NAME            | TYPE <sup>(1)</sup> | FUNCTION  |
|---------------|-----------------|---------------------|---|
| TSSOP20/SOP20 |                 |                     |   |
| 2             | A0              | I/O                 | Input/output  |
| 3             | A1              | I/O                 | Input/output  |
| 4             | A2              | I/O                 | Input/output  |
| 5             | A3              | I/O                 | Input/output  |
| 6             | A4              | I/O                 | Input/output  |
| 7             | A5              | I/O                 | Input/output  |
| 8             | A6              | I/O                 | Input/output  |
| 9             | A7              | I/O                 | Input/output  |
| 11            | B7              | I/O                 | Input/output  |
| 12            | B6              | I/O                 | Input/output  |
| 13            | B5              | I/O                 | Input/output  |
| 14            | B4              | I/O                 | Input/output  |
| 15            | B3              | I/O                 | Input/output  |
| 16            | B2              | I/O                 | Input/output  |
| 17            | B1              | I/O                 | Input/output  |
| 18            | B0              | I/O                 | Input/output  |
| 1             | DIR             | I                   | direction control   |
| 10            | GND             | G                   | Ground.   |
| 19            | $\overline{OE}$ | I                   | Output Enable (Active Low). Pull $\overline{OE}$ high to place all outputs in 3-state mode. |
| 20            | V <sub>cc</sub> | P                   | supply voltage. 1.65V ≤ V <sub>cc</sub> ≤ 5.5V  |

(1) I=input, O=output, I/O=input and output, P=power

## SPECIFICATIONS

### Absolute Maximum Ratings

Over operating free-air temperature range (unless otherwise noted) <sup>(1)</sup>

| SYMBOL         | PARAMETER  |                | MIN  | MAX          | UNIT |
|----------------|--|----------------|------|--------------|------|
| $V_{CC}$       | Supply Voltage Range   |                | -0.5 | 6.5          | V    |
| $V_I^{(2)}$    | Input Voltage Range  | A port         | -0.5 | 6.5          | V    |
|                |  | B port         | -0.5 | 6.5          |      |
|                |  | Control inputs | -0.5 | 6.5          |      |
| $V_O^{(2)}$    | Voltage range applied to any output in the high-impedance or power-off state | A port         | -0.5 | 6.5          | V    |
|                |  | B port         | -0.5 | 6.5          |      |
| $V_O^{(2)(3)}$ | Voltage range applied to any output in the high or low state                 | A port         | -0.5 | $V_{CC}+0.5$ | V    |
|                |  | B port         | -0.5 | $V_{CC}+0.5$ |      |
| $I_{IK}$       | Input clamp current  | $V_I < 0$      |      | -50          | mA   |
| $I_{OK}$       | Output clamp current   | $V_O < 0$      |      | -50          | mA   |
| $I_O$          | Continuous output current  |                |      | $\pm 50$     | mA   |
|                | Continuous current through $V_{CC}$ or GND                                   |                |      | $\pm 100$    |      |
| $T_J$          | Junction Temperature   |                |      | 150          | °C   |
| $T_{stg}$      | Storage temperature  |                | -65  | 150          |      |

(1) Stresses beyond those listed under *Absolute Maximum Ratings* may cause permanent damage to the device. These are stress ratings only, which do not imply functional operation of the device at these or any other conditions beyond those indicated under *Recommended Operating Conditions*. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

(2) The input and output negative-voltage ratings may be exceeded if the input and output current ratings are observed.

(3) The value of  $V_{CC}$  are provided in the recommended operating conditions table.

### ESD Ratings

|             |                         | VALUE                  | UNIT       |
|-------------|-------------------------|------------------------|------------|
| $V_{(ESD)}$ | Electrostatic discharge | Human-body model (HBM) | $\pm 3000$ |
|             |                         | Machine Model (MM)     | $\pm 400$  |

## Recommended Operating Conditions

$V_{CC}$  is the supply voltage associated with the input port and output port.<sup>(1)(2)</sup>

| PARAMETER  |               | $V_{CC}$       | MIN                  | TYP | MAX                  | UNIT |
|--|---------------|----------------|----------------------|-----|----------------------|------|
| Supply voltage   | $V_{CC}$      |                | 1.65                 |     | 5.5                  | V    |
| High-level input Voltage ( $V_{IH}$ )                      | Inputs        | 1.65V to 1.95V | $V_{CC} \times 0.65$ |     |                      | V    |
|  |               | 2.3V to 2.7V   | 1.7                  |     |                      |      |
|  |               | 3V to 3.6V     | 2                    |     |                      |      |
|  |               | 4.5V to 5.5V   | $V_{CC} \times 0.7$  |     |                      |      |
| Low-level input Voltage ( $V_{IL}$ )                       | Inputs        | 1.65V to 1.95V |                      |     | $V_{CC} \times 0.35$ | V    |
|  |               | 2.3V to 2.7V   |                      |     | 0.7                  |      |
|  |               | 3V to 3.6V     |                      |     | 0.8                  |      |
|  |               | 4.5V to 5.5V   |                      |     | $V_{CC} \times 0.3$  |      |
| Input voltage ( $V_I$ )                                    | Input voltage |                | 0                    |     | 5.5                  | V    |
| Input/output voltage ( $V_{IO}$ )                          | Active state  |                | 0                    |     | $V_{CC}$             | V    |
|  | 3-state       |                | 0                    |     | 5.5                  | V    |
| High-level output current ( $I_{OH}$ )                     |               | 1.65V to 1.95V |                      |     | -4                   | mA   |
|  |               | 2.3V to 2.7V   |                      |     | -8                   |      |
|  |               | 3V to 3.6V     |                      |     | -24                  |      |
|  |               | 4.5V to 5.5V   |                      |     | -32                  |      |
| Low-level output current ( $I_{OL}$ )                      |               | 1.65V to 1.95V |                      |     | 4                    | mA   |
|  |               | 2.3V to 2.7V   |                      |     | 8                    |      |
|  |               | 3V to 3.6V     |                      |     | 24                   |      |
|  |               | 4.5V to 5.5V   |                      |     | 32                   |      |
| Input transition rise or fall rate ( $\Delta t/\Delta v$ ) | Data inputs   | 1.65V to 1.95V |                      |     | 20                   | ns/V |
|  |               | 2.3V to 2.7V   |                      |     | 20                   |      |
|  |               | 3V to 3.6V     |                      |     | 10                   |      |
|  |               | 4.5V to 5.5V   |                      |     | 5                    |      |
| $T_A$ Operating free-air temperature                       |               |                | -40                  |     | 125                  | °C   |

(1) All unused or driven (floating) data inputs (I/Os) of the device must be held at logic HIGH or LOW (preferably  $V_{CC}$  or GND) to ensure proper device operation and minimize power.

(2) All unused control inputs must be held at  $V_{CC}$  or GND to ensure proper device operation and minimize power consumption.

(3) For  $V_{CC}$  values not specified in the data sheet,  $V_{IH} \text{ min} = V_{CC} \times 0.7 \text{ V}$ ,  $V_{IL} \text{ max} = V_{CC} \times 0.3 \text{ V}$ .

**PACKAGE/ORDERING INFORMATION**

| PRODUCT | ORDERING NUMBER | TEMPERATURE RANGE | PACKAGE LEAD | PACKAGE MARKING <sup>(1)</sup> | MSL <sup>(2)</sup> | PACKAGE OPTION     |
|---------|-----------------|-------------------|--------------|--------------------------------|--------------------|--------------------|
| RS245   | RS245YTSS20     | -40°C ~+125°C     | TSSOP20      | RS245                          | MSL3               | Tape and Reel,4000 |
|         | RS245YS20       | -40°C ~+125°C     | SOP20        | RS245                          | MSL3               | Tape and Reel,1500 |

NOTE:

- (1) There may be additional marking, which relates to the lot trace code information(data code and vendor code), the logo or the environmental category on the device.
- (2) MSL, The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications.

## Electrical Characteristics

over recommended operating free-air temperature range (unless otherwise noted) <sup>(1)</sup> <sup>(2)</sup> <sup>(3)</sup>

| PARAMETER        |                                | CONDITIONS  | V <sub>CC</sub> | TEMP  | MIN                   | TYP | MAX  | UNIT |
|------------------|--------------------------------|---|-----------------|-------|-----------------------|-----|------|------|
| V <sub>OH</sub>  |                                | I <sub>OH</sub> = -100 μA V <sub>I</sub> = V <sub>IH</sub>                        | 1.65V to 4.5V   | Full  | V <sub>CC</sub> - 0.1 |     |      | V    |
|                  |                                | I <sub>OH</sub> = -4mA V <sub>I</sub> = V <sub>IH</sub>                           | 1.65V           |       | 1.2                   |     |      |      |
|                  |                                | I <sub>OH</sub> = -8mA V <sub>I</sub> = V <sub>IH</sub>                           | 2.3V            |       | 1.9                   |     |      |      |
|                  |                                | I <sub>OH</sub> = -24mA V <sub>I</sub> = V <sub>IH</sub>                          | 3V              |       | 2.4                   |     |      |      |
|                  |                                | I <sub>OH</sub> = -32mA V <sub>I</sub> = V <sub>IH</sub>                          | 4.5V            |       | 3.8                   |     |      |      |
| V <sub>OL</sub>  |                                | I <sub>OL</sub> = 100 μA V <sub>I</sub> = V <sub>IL</sub>                         | 1.65V to 4.5V   |       |                       |     | 0.1  | V    |
|                  |                                | I <sub>OL</sub> = 4mA V <sub>I</sub> = V <sub>IL</sub>                            | 1.65V           |       |                       |     | 0.45 |      |
|                  |                                | I <sub>OL</sub> = 8mA V <sub>I</sub> = V <sub>IL</sub>                            | 2.3V            |       |                       |     | 0.3  |      |
|                  |                                | I <sub>OL</sub> = 24mA V <sub>I</sub> = V <sub>IL</sub>                           | 3V              |       |                       |     | 0.55 |      |
|                  |                                | I <sub>OL</sub> = 32mA V <sub>I</sub> = V <sub>IL</sub>                           | 4.5V            |       |                       |     | 0.55 |      |
| I <sub>I</sub>   | DIR                            | V <sub>I</sub> = V <sub>CC</sub> or GND   | 1.65V to 5.5V   | +25°C |                       |     | ±1   | μA   |
|                  |                                |   |                 | Full  |                       |     | ±2   |      |
| I <sub>off</sub> | A or B Port                    | V <sub>I</sub> or V <sub>O</sub> = 0 to 5.5V                                      | 0V              | +25°C |                       |     | ±1   | μA   |
| I <sub>oz</sub>  | A or B Port                    | V <sub>O</sub> = V <sub>CC</sub> or GND,<br>OE = V <sub>IH</sub>                  | 1.65V to 5.5V   | +25°C |                       |     | ±1   | μA   |
|                  |                                |   |                 | Full  |                       |     | ±2   |      |
| I <sub>CC</sub>  | V <sub>CC</sub> supply current | V <sub>I</sub> = V <sub>CC</sub> or GND<br>I <sub>O</sub> = 0                     | 1.65V to 5.5V   | +25°C |                       |     | 1    | μA   |
|                  |                                |   |                 | Full  |                       |     | 5    |      |
|                  |                                |   |                 | 0V    | Full                  |     |      |      |
| ΔI <sub>CC</sub> | A port                         | One A port at V <sub>CC</sub> - 0.6 V, DIR at V <sub>CC</sub> , B port = open     | 3V to 5.5V      | Full  |                       |     | 50   | μA   |
|                  | B port                         | One B port at V <sub>CC</sub> - 0.6 V, DIR at GND, A port = open                  |                 | Full  |                       |     | 50   | μA   |
|                  | DIR                            | DIR at V <sub>CC</sub> - 0.6 V, B port = open<br>A port at V <sub>CC</sub> or GND |                 | Full  |                       |     | 50   | μA   |
| C <sub>I</sub>   | Control inputs                 | V <sub>I</sub> = V <sub>CC</sub> or GND   | 3.3V            | +25°C |                       | 4   |      | pF   |
| C <sub>IO</sub>  | A port                         |   | 3.3V            | +25°C |                       | 8.5 |      | pF   |
|                  | B port                         |   | 3.3V            | +25°C |                       | 8.5 |      |      |



## Switching Characteristics

| PARAMETER        | FROM (INPUT)    | TO (OUTPUT) | V <sub>CC</sub> =1.8V<br>±0.15V |      | V <sub>CC</sub> =2.5V<br>±0.2V |      | V <sub>CC</sub> =3.3V<br>±0.3V |      | V <sub>CC</sub> =5V<br>±0.5V |      | UNIT |
|------------------|-----------------|-------------|---------------------------------|------|--------------------------------|------|--------------------------------|------|------------------------------|------|------|
|                  |                 |             | MIN                             | MAX  | MIN                            | MAX  | MIN                            | MAX  | MIN                          | MAX  |      |
| t <sub>PLH</sub> | An              | Bn          | 1.7                             | 21.6 | 1.3                            | 9.1  | 1.0                            | 7.4  | 0.8                          | 7.1  | ns   |
| t <sub>PHL</sub> |                 |             |                                 |      |                                |      |                                |      |                              |      |      |
| t <sub>PLH</sub> | Bn              | An          | 0.9                             | 23.5 | 0.8                            | 23.6 | 0.7                            | 23.3 | 0.7                          | 23.3 | ns   |
| t <sub>PHL</sub> |                 |             |                                 |      |                                |      |                                |      |                              |      |      |
| t <sub>PHZ</sub> | $\overline{OE}$ | An          | 1.5                             | 29.5 | 1.5                            | 29.4 | 1.5                            | 29.3 | 1.4                          | 29.1 | ns   |
| t <sub>PLZ</sub> |                 |             |                                 |      |                                |      |                                |      |                              |      |      |
| t <sub>PHZ</sub> | $\overline{OE}$ | Bn          | 2.4                             | 32.2 | 1.9                            | 12.9 | 1.7                            | 12.0 | 1.3                          | 10.2 | ns   |
| t <sub>PLZ</sub> |                 |             |                                 |      |                                |      |                                |      |                              |      |      |
| t <sub>PZH</sub> | $\overline{OE}$ | An          | 0.4                             | 23.8 | 0.4                            | 23.7 | 0.4                            | 23.7 | 0.4                          | 23.7 | ns   |
| t <sub>PZL</sub> |                 |             |                                 |      |                                |      |                                |      |                              |      |      |
| t <sub>PZH</sub> | $\overline{OE}$ | Bn          | 1.8                             | 31.9 | 1.5                            | 16   | 1.2                            | 12.6 | 0.9                          | 10.8 | ns   |
| t <sub>PZL</sub> |                 |             |                                 |      |                                |      |                                |      |                              |      |      |

## Operating Characteristics

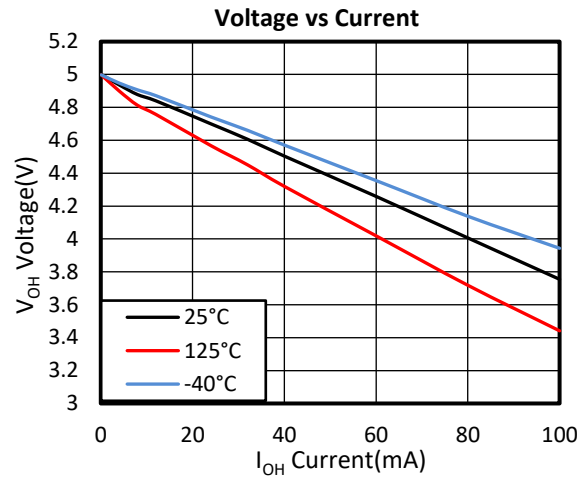
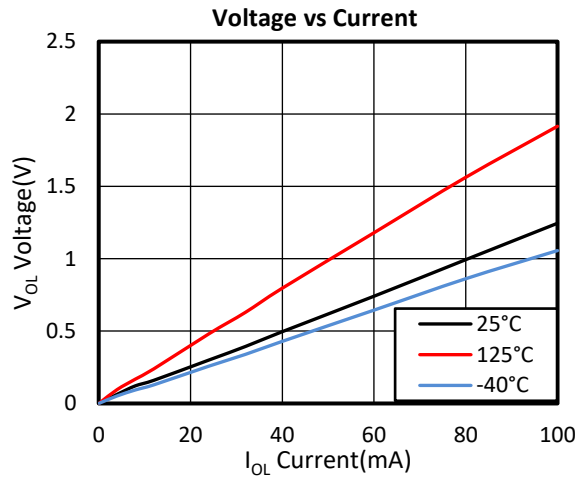
T<sub>A</sub>=25°C

| PARAMETER                      |                             | TEST CONDITIONS   | V <sub>CC</sub> =1.8V | V <sub>CC</sub> =2.5V | V <sub>CC</sub> =3.3V | V <sub>CC</sub> =5V | UNIT |
|--------------------------------|-----------------------------|---|-----------------------|-----------------------|-----------------------|---------------------|------|
|                                |                             |   | TYP                   | TYP                   | TYP                   | TYP                 |      |
| C <sub>pd</sub> <sup>(1)</sup> | A-port input, B-port output | C <sub>L</sub> =0,<br>f=10MHz,<br>t <sub>r</sub> =t <sub>f</sub> =1ns | 2                     | 2                     | 2                     | 3                   | pF   |
|                                | B-port input, A-port output |   | 42                    | 42                    | 43                    | 44                  |      |

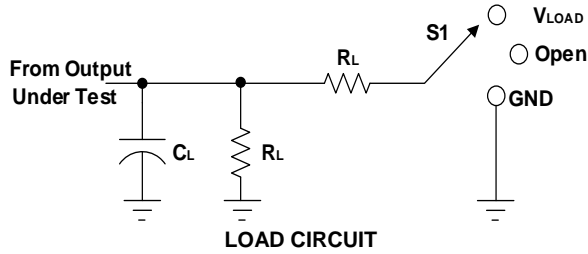
(1) Power dissipation capacitance per transceiver

## Typical Characteristics

At  $T_A = +25^\circ\text{C}$ ,  $V_{CC}=5\text{V}$ , unless otherwise noted.

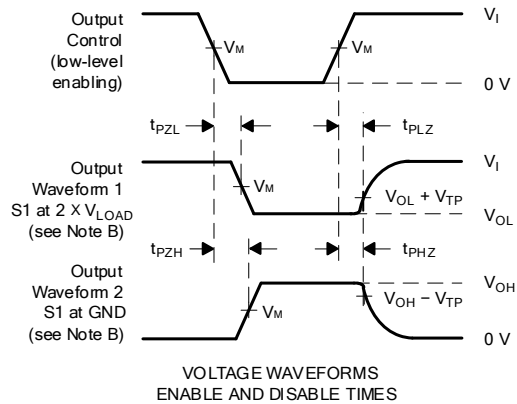
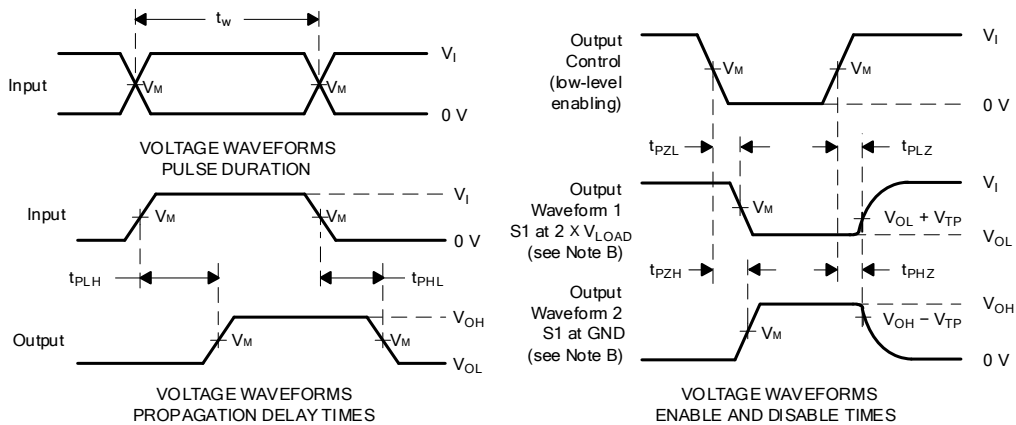


## Parameter Measurement Information



| TEST              | S1         |
|-------------------|------------|
| $t_{pd}$          | Open       |
| $t_{PLZ}/t_{PZL}$ | $V_{LOAD}$ |
| $t_{PHZ}/t_{PZH}$ | GND        |

| $V_{CC}$         | $V_I$    | $V_M$      | $C_L$ | $R_L$       | $V_{TP}$ |
|------------------|----------|------------|-------|-------------|----------|
| $1.8V \pm 0.15V$ | $V_{CC}$ | $V_{CC}/2$ | 15pF  | 2k $\Omega$ | 0.15V    |
| $2.5V \pm 0.2V$  | $V_{CC}$ | $V_{CC}/2$ | 15pF  | 2k $\Omega$ | 0.15V    |
| $3.3V \pm 0.3V$  | 2.7V     | 1.5V       | 15pF  | 2k $\Omega$ | 0.3V     |
| $5V \pm 0.5V$    | 2.7V     | 1.5V       | 15pF  | 2k $\Omega$ | 0.3V     |



NOTES: A.  $C_L$  includes probe and jig capacitance.

B. Waveform 1 is for an output with internal conditions such that the output is low, except when disabled by the output control.

Waveform 2 is for an output with internal conditions such that the output is high, except when disabled by the output control.

C. All input pulses are supplied by generators having the following characteristics:  $PRR \leq 10$  MHz,  $Z_O = 50 \Omega$ ,  $dv/dt \geq 1V/ns$ .

D. The outputs are measured one at a time, with one transition per measurement.

E.  $t_{PLZ}$  and  $t_{PHZ}$  are the same as  $t_{dis}$ .

F.  $t_{PZL}$  and  $t_{PZH}$  are the same as  $t_{en}$ .

G.  $t_{PLH}$  and  $t_{PHL}$  are the same as  $t_{pd}$ .

H. All parameters and waveforms are not applicable to all devices.

**Figure 1. Load Circuit and Voltage Waveforms**

## Application Information

RS245 is a high drive CMOS device that can be used for a multitude of bus interface type applications where output drive or PCB trace length is a concern. The inputs can accept voltages to 5.5 V at any valid  $V_{CC}$  making it ideal for down translation.

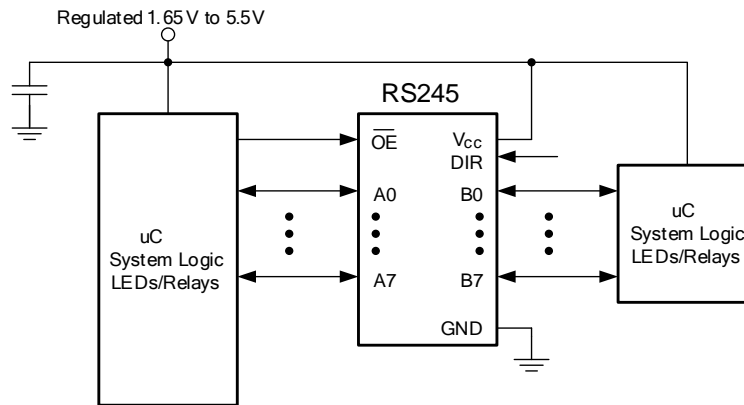
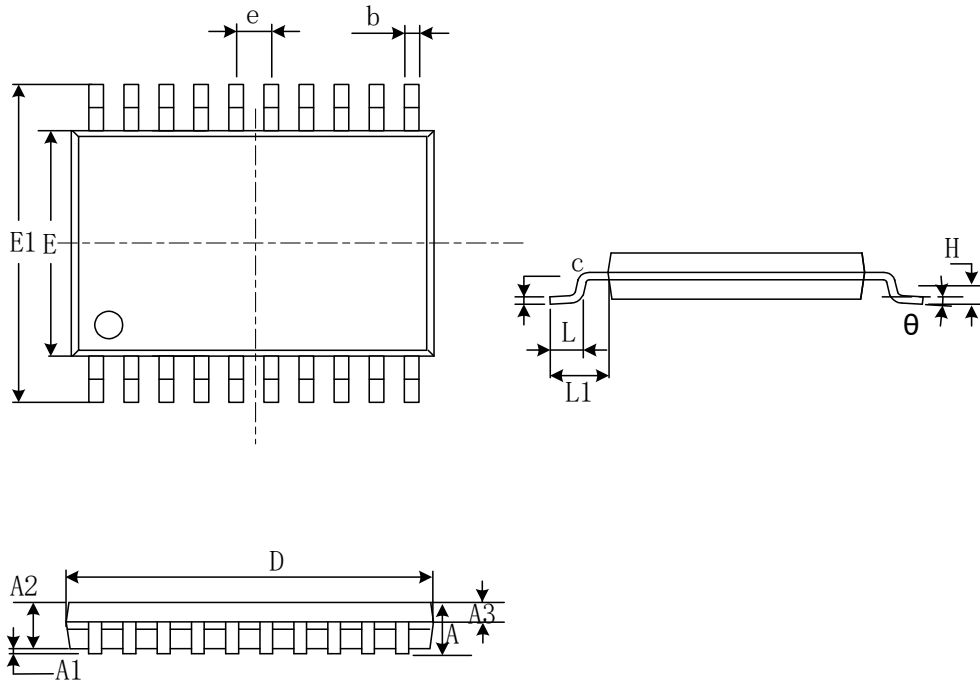


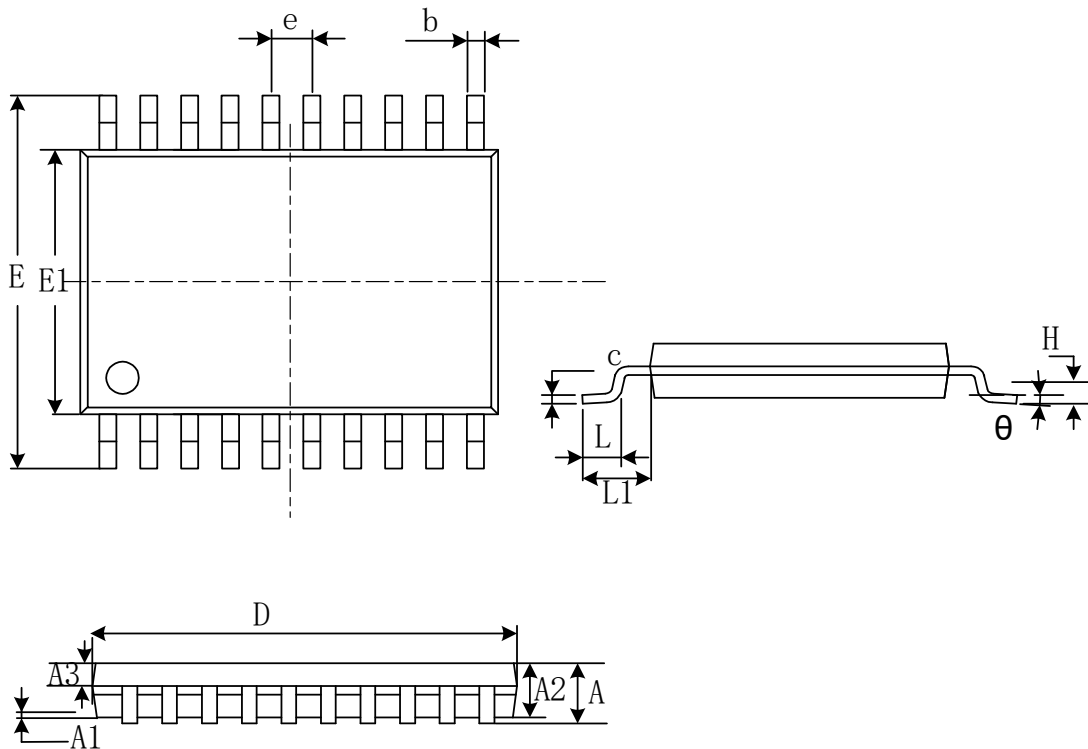
Figure 2. Typical Application Schematic

# PACKAGE OUTLINE DIMENSIONS

## TSSOP20



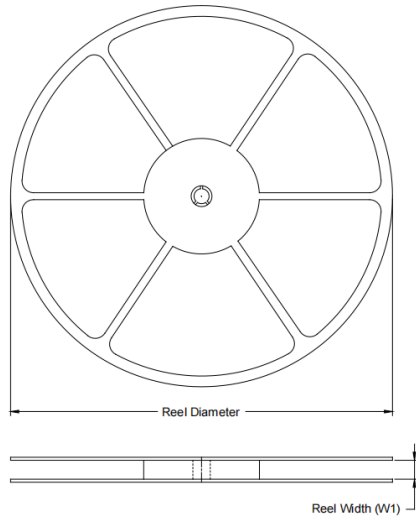
| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| A        |                           | 1.200 |                      | 0.047 |
| A1       | 0.050                     | 0.150 | 0.002                | 0.006 |
| A2       | 0.800                     | 1.050 | 0.031                | 0.041 |
| A3       | 0.390                     | 0.490 | 0.015                | 0.020 |
| b        | 0.200                     | 0.290 | 0.008                | 0.011 |
| c        | 0.130                     | 0.170 | 0.005                | 0.007 |
| D        | 6.400                     | 6.600 | 0.252                | 0.260 |
| E        | 4.300                     | 4.500 | 0.169                | 0.177 |
| E1       | 6.200                     | 6.600 | 0.244                | 0.260 |
| e        | 0.650(BSC)                |       | 0.026(BSC)           |       |
| L        | 0.450                     | 0.750 | 0.018                | 0.030 |
| H        | 0.250(TYP)                |       | 0.010(TYP)           |       |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |
| L1       | 1.00(REF)                 |       | 0.039(REF)           |       |

**SOP20**


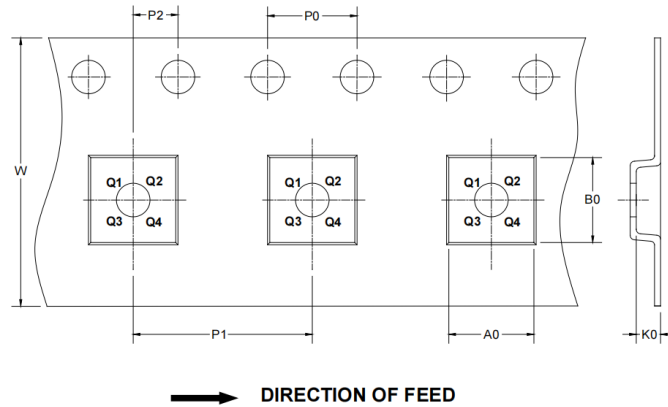
| Symbol   | Dimensions In Millimeters |        | Dimensions In Inches |       |
|----------|---------------------------|--------|----------------------|-------|
|          | Min                       | Max    | Min                  | Max   |
| A        |                           | 2.650  |                      | 0.104 |
| A1       | 0.100                     | 0.300  | 0.004                | 0.012 |
| A2       | 2.250                     | 2.350  | 0.089                | 0.093 |
| A3       | 0.970                     | 1.070  | 0.038                | 0.042 |
| b        | 0.390                     | 0.470  | 0.015                | 0.019 |
| c        | 0.250                     | 0.290  | 0.010                | 0.011 |
| D        | 12.700                    | 12.900 | 0.500                | 0.508 |
| E        | 10.100                    | 10.500 | 0.398                | 0.413 |
| E1       | 7.400                     | 7.600  | 0.291                | 0.299 |
| e        | 1.270(BSC)                |        | 0.050(BSC)           |       |
| L        | 0.700                     | 1.000  | 0.028                | 0.039 |
| H        | 0.250(TYP)                |        | 0.010(TYP)           |       |
| $\theta$ | 0°                        | 8°     | 0°                   | 8°    |
| L1       | 1.400(REF)                |        | 0.055(REF)           |       |

## TAPE AND REEL INFORMATION

### REEL DIMENSIONS



### TAPE DIMENSION



NOTE: The picture is only for reference. Please make the object as the standard.

### KEY PARAMETER LIST OF TAPE AND REEL

| Package Type | Reel Diameter | Reel Width (mm) | A0 (mm) | B0 (mm) | K0 (mm) | P0 (mm) | P1 (mm) | P2 (mm) | W (mm) | Pin1 Quadrant |
|--------------|---------------|-----------------|---------|---------|---------|---------|---------|---------|--------|---------------|
| TSSOP20      | 13"           | 12.4            | 6.75    | 6.95    | 1.20    | 4.0     | 8.0     | 2.0     | 12.0   | Q1            |
| SOP20        | 13"           | 24.4            | 10.75   | 13.55   | 2.65    | 4.0     | 12.0    | 2.0     | 24.0   | Q1            |

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Buffers & Line Drivers](#) category:*

*Click to view products by [RUNIC](#) manufacturer:*

Other Similar products are found below :

[LXV200-024SW](#) [74AUP2G34FW3-7](#) [HEF4043BP](#) [NL17SG125DFT2G](#) [NLU1GT126CMUTCG](#) [CD4041UBE](#) [54FCT240CTDB](#)  
[74HCT540N](#) [DS14C88N](#) [070519XB](#) [NL17SZ07P5T5G](#) [74LVC2G17FW4-7](#) [CD4502BE](#) [5962-8982101PA](#) [61446R00](#) [NL17SH17P5T5G](#)  
[NLV37WZ17USG](#) [74HCT126T14-13](#) [74VHC9126FT\(BJ\)](#) [RHRXH162244K1](#) [74AUP1G34FW5-7](#) [74AUP1G07FW5-7](#) [74LVC1G126FW4-7](#)  
[74LVC2G126RA3-7](#) [74LVCE1G125FZ4-7](#) [54FCT240TLB](#) [NLX3G16DMUTCG](#) [NLX2G06AMUTCG](#) [LE87100NQCT](#) [LE87285NQC](#)  
[LE87290YQC](#) [LE87290YQCT](#) [74AUP1G125FW5-7](#) [NLU2G16CMUTCG](#) [MC74LCX244MN2TWG](#) [NL17SG17P5T5G](#)  
[NLV74HC125ADR2G](#) [NLVHCT245ADTR2G](#) [NLVVHC1G126DFT2G](#) [EL5623IRZ](#) [ISL15102AIRZ-T13](#) [ISL1539IRZ-T13](#)  
[MC100EP17MNG](#) [MC74HCT365ADR2G](#) [MC74LCX244ADTR2G](#) [NL27WZ126US](#) [NL37WZ16US](#) [NLU1G07MUTCG](#) [NLU2G07MUTCG](#)  
[NLX3G17BMX1TCG](#)