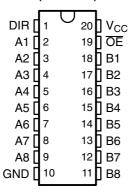
SCLS131D - DECEMBER 1982 - REVISED AUGUST 2003

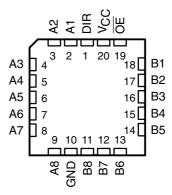
- Wide Operating Voltage Range of 2 V to 6 V
- High-Current 3-State Outputs Drive Bus Lines Directly or Up To 15 LSTTL Loads
- Low Power Consumption, 80-μA Max I_{CC}

SN54HC245 . . . J OR W PACKAGE SN74HC245 . . . DB, DW, N, NS, OR PW PACKAGE (TOP VIEW)



- Typical t_{pd} = 12 ns
- ±6-mA Output Drive at 5 V
- Low Input Current of 1 μA Max

SN54HC245 . . . FK PACKAGE (TOP VIEW)



description/ordering information

These octal bus transceivers are designed for asynchronous two-way communication between data buses. The control-function implementation minimizes external timing requirements.

The devices allow data transmission from the A bus to the B bus or from the B bus to the A bus, depending on the logic level at the direction-control (DIR) input. The output-enable (\overline{OE}) input can be used to disable the device so that the buses are effectively isolated.

ORDERING INFORMATION

T _A	PACKA	GE [†]	ORDERABLE PART NUMBER	TOP-SIDE MARKING	
	PDIP – N	Tube of 20	SN74HC245N	SN74HC245N	
	COIC DW	Tube of 25	SN74HC245DW	110045	
	SOIC – DW	Reel of 2000	SN74HC245DWR	HC245	
4000 to 0500	SOP - NS	Reel of 2000	SN74HC245NSR	HC245	
-40°C to 85°C	SSOP – DB	Reel of 2000	SN74HC245DBR	HC245	
		Tube of 70	SN74HC245PW		
	TSSOP - PW	Reel of 2000	SN74HC245PWR	HC245	
		Reel of 250	SN74HC245PWT		
	CDIP – J	Tube of 20	SNJ54HC245J	SNJ54HC245J	
–55°C to 125°C	CFP – W	Tube of 85	SNJ54HC245W	SNJ54HC245W	
	LCCC – FK	Tube of 55	SNJ54HC245FK	SNJ54HC245FK	

[†] Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at www.ti.com/sc/package.



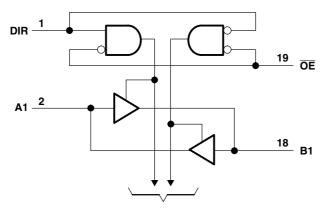
Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.



FUNCTION TABLE

INP	UTS	ODEDATION
OE	DIR	OPERATION
L	L	B data to A bus
L	Н	A data to B bus
Н	Χ	Isolation

logic diagram (positive logic)



To Seven Other Channels

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

Supply voltage range, V _{CC}		0.5 V to 7 V
Input clamp current, I_{IK} ($V_I < 0$ or $V_I > V_{CC}$) (se	e Note 1)	±20 mA
Output clamp current, I _{OK} (V _O < 0 or V _O > V _{CC}) (see Note 1)	±20 mA
Continuous output current, I_O ($V_O = 0$ to V_{CC})		±35 mA
Continuous current through V _{CC} or GND		±70 mA
Package thermal impedance, θ_{JA} (see Note 2):	: DB package	70°C/W
- · · · · · · · · · · · · · · · · · · ·	DW package	58°C/W
	N package	69°C/W
	NS package	60°C/W
	PW package	83°C/W
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. The input and output voltage ratings may be exceeded if the input and output current ratings are observed.
 - 2. The package thermal impedance is calculated in accordance with JESD 51-7.



recommended operating conditions (see Note 3)

			SI	N54HC24	15	SN	174HC24	15	
			MIN	NOM	MAX	MIN	NOM	MAX	UNIT
V_{CC}	Supply voltage		2	5	6	2	5	6	V
		V _{CC} = 2 V	1.5			1.5			
V _{IH}	High-level input voltage	$V_{CC} = 4.5 \text{ V}$	3.15			3.15			V
		$V_{CC} = 6 V$	4.2			4.2			
		V _{CC} = 2 V			0.5			0.5	
V_{IL}	Low-level input voltage	$V_{CC} = 4.5 \text{ V}$			1.35			1.35	V
		$V_{CC} = 6 V$			1.8			1.8	
VI	Input voltage		0		V_{CC}	0		V_{CC}	V
Vo	Output voltage		0		V_{CC}	0		V_{CC}	V
		V _{CC} = 2 V			1000			1000	
Δt/Δν	Input transition rise/fall time	$V_{CC} = 4.5 \text{ V}$			500			500	ns
		V _{CC} = 6 V			400			400	
T _A	Operating free-air temperature		-55		125	-40		85	°C

NOTE 3: All unused inputs of the device must be held at V_{CC} or GND to ensure proper device operation. Refer to the TI application report, Implications of Slow or Floating CMOS Inputs, literature number SCBA004.

electrical characteristics over recommended operating free-air temperature range (unless otherwise noted)

			NEUTIONO	,,	T	T _A = 25°C	;	SN54H	IC245	SN74H	C245	
PAR	AMETER	TEST CO	NDITIONS	V _{CC}	MIN	TYP	MAX	MIN	MAX	MIN	MAX	UNIT
				2 V	1.9	1.998		1.9		1.9		
			$I_{OH} = -20 \mu A$	4.5 V	4.4	4.499		4.4		4.4		
V _{OH}		$V_i = V_{iH}$ or V_{iL}		6 V	5.9	5.999		5.9		5.9		V
			$I_{OH} = -6 \text{ mA}$	4.5 V	3.98	4.3		3.7		3.84		
			$I_{OH} = -7.8 \text{ mA}$	6 V	5.48	5.8		5.2		5.34		
				2 V		0.002	0.1		0.1		0.1	
			$I_{OL} = 20 \mu A$	4.5 V		0.001	0.1		0.1		0.1	
V_{OL}		$V_i = V_{iH}$ or V_{iL}		6 V		0.001	0.1		0.1		0.1	V
			$I_{OL} = 6 \text{ mA}$	4.5 V		0.17	0.26		0.4		0.33	
			$I_{OL} = 7.8 \text{ mA}$	6 V		0.15	0.26		0.4		0.33	
I _I	DIR or OE	$V_I = V_{CC}$ or 0		6 V		±0.1	±100		±1000		±1000	nA
l _{OZ}	A or B	$V_O = V_{CC}$ or 0		6 V		±0.01	±0.5		±10		±5	μΑ
I _{CC}		$V_I = V_{CC}$ or 0,	I _O = 0	6 V			8		160		80	μΑ
Ci	DIR or OE			2 V to 6 V		3	10		10		10	pF

SN54HC245, SN74HC245 OCTAL BUS TRANSCEIVERS WITH 3-STATE OUTPUTS

SCLS131D - DECEMBER 1982 - REVISED AUGUST 2003

switching characteristics over recommended operating free-air temperature range, C_L = 50 pF (unless otherwise noted) (see Figure 1)

DADAMETED	FROM	то		Τ _Δ	(= 25°C	;	SN54H	IC245	SN74H	C245	
PARAMETER	(INPUT)	(OUTPUT)	v _{cc}	MIN	TYP	MAX	MIN	MAX	MIN	MAX	UNIT
			2 V		40	105		160		130	
t _{pd}	A or B	B or A	4.5 V		15	21		32		26	ns
·			6 V		12	18		27		22	
			2 V		125	230		340		290	
t _{en}	ŌĒ	A or B	4.5 V		23	46		68		58	ns
			6 V		20	39		58		49	
			2 V		74	200		300		250	
t _{dis}	ŌĒ	A or B	4.5 V		25	40		60		50	ns
			6 V		21	34		51		43	
			2 V		20	60		90		75	
t _t		A or B	4.5 V		8	12		18		15	ns
			6 V		6	10		15		13	

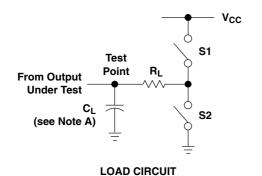
switching characteristics over recommended operating free-air temperature range, C_L = 150 pF (unless otherwise noted) (see Figure 1)

	FROM	то	.,	T,	չ = 25°C	;	SN54F	IC245	SN74H	IC245		
PARAMETER	(INPUT)	(OUTPUT)	v _{cc}	MIN	TYP	MAX	MIN	MAX	MIN	MAX	UNIT	
			2 V		54	135		200		170		
t _{pd}	A or B	B or A	4.5 V		18	27		40		34	ns	
	·		6 V		15	23		34		29		
			2 V		150	270		405		335		
t _{en}	ŌĒ	A or B	4.5 V		31	54		81		67	ns	
			6 V		25	46		69		56		
			2 V		45	210		315		265		
t _t	A or B	A or B	A or B	4.5 V		17	42		63		53	ns
			6 V		13	36		53		45		

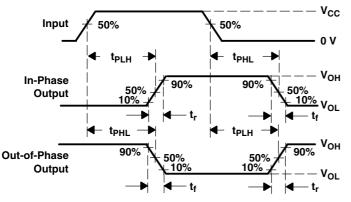
operating characteristics, $T_A = 25^{\circ}C$

	PARAMETER	TEST CONDITIONS	TYP	UNIT
C _{pd}	Power dissipation capacitance per transceiver	No load	40	pF

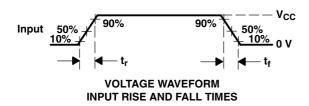
PARAMETER MEASUREMENT INFORMATION

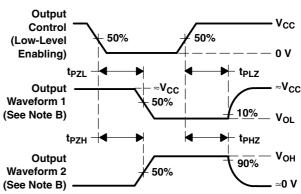


PARAI	PARAMETER		CL	S1	S2	
	$t_{en} = \frac{t_{PZH}}{t_{PZL}} 1 \mathbf{k} \Omega$		50 pF or	Open	Closed	
^L en			150 pF	Closed	Open	
	t _{PHZ}	1 k Ω	50 pF	Open	Closed	
^L dis	t _{dis}		50 pr	Closed	Open	
t _{pd} or	t _{pd} or t _t		50 pF or 150 pF	Open	Open	



VOLTAGE WAVEFORMS
PROPAGATION DELAY AND OUTPUT TRANSITION TIMES





VOLTAGE WAVEFORMS
ENABLE AND DISABLE TIMES FOR 3-STATE OUTPUTS

- NOTES: A. C_L includes probe and test-fixture 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. Phase relationships between waveforms were chosen arbitrarily. All input pulses are supplied by generators having the following characteristics: PRR \leq 1 MHz, $Z_O = 50 \Omega$, $t_r = 6$ ns, $t_f = 6$ ns.
 - D. The outputs are measured one at a time with one input 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}.

Figure 1. Load Circuit and Voltage Waveforms



23-Mar-2012

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/ Ball Finish	MSL Peak Temp ⁽³⁾	Samples (Requires Login)
5962-8408501VRA	ACTIVE	CDIP	J	20	20	TBD	A42	N / A for Pkg Type	
5962-8408501VSA	ACTIVE	CFP	W	20	25	TBD	Call TI	N / A for Pkg Type	
84085012A	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Call TI	
8408501RA	ACTIVE	CDIP	J	20	1	TBD	Call TI	Call TI	
8408501SA	ACTIVE	CFP	W	20	1	TBD	Call TI	Call TI	
JM38510/65503BRA	ACTIVE	CDIP	J	20	1	TBD	A42	N / A for Pkg Type	
JM38510/65503BSA	ACTIVE	CFP	W	20	1	TBD	Call TI	N / A for Pkg Type	
M38510/65503BRA	ACTIVE	CDIP	J	20	1	TBD	A42	N / A for Pkg Type	
M38510/65503BSA	ACTIVE	CFP	W	20	1	TBD	Call TI	N / A for Pkg Type	
SN54HC245J	ACTIVE	CDIP	J	20	1	TBD	A42	N / A for Pkg Type	
SN74HC245DBLE	OBSOLETE	SSOP	DB	20		TBD	Call TI	Call TI	
SN74HC245DBR	ACTIVE	SSOP	DB	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245DBRE4	ACTIVE	SSOP	DB	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245DBRG4	ACTIVE	SSOP	DB	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245DW	ACTIVE	SOIC	DW	20	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245DWE4	ACTIVE	SOIC	DW	20	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245DWG4	ACTIVE	SOIC	DW	20	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245DWR	ACTIVE	SOIC	DW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245DWRE4	ACTIVE	SOIC	DW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245DWRG4	ACTIVE	SOIC	DW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245N	ACTIVE	PDIP	N	20	20	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	
SN74HC245N3	OBSOLETE	PDIP	N	20		TBD	Call TI	Call TI	
SN74HC245NE4	ACTIVE	PDIP	N	20	20	Pb-Free (RoHS)	CU NIPDAU	N / A for Pkg Type	





23-Mar-2012

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/ Ball Finish	MSL Peak Temp ⁽³⁾	Samples (Requires Login)
SN74HC245NSR	ACTIVE	SO	NS	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245NSRE4	ACTIVE	SO	NS	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245NSRG4	ACTIVE	SO	NS	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PW	ACTIVE	TSSOP	PW	20	70	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PWE4	ACTIVE	TSSOP	PW	20	70	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PWG4	ACTIVE	TSSOP	PW	20	70	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PWLE	OBSOLETE	TSSOP	PW	20		TBD	Call TI	Call TI	
SN74HC245PWR	ACTIVE	TSSOP	PW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PWRE4	ACTIVE	TSSOP	PW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PWRG3	PREVIEW	TSSOP	PW	20	2000	TBD	Call TI	Call TI	
SN74HC245PWRG4	ACTIVE	TSSOP	PW	20	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PWT	ACTIVE	TSSOP	PW	20	250	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PWTE4	ACTIVE	TSSOP	PW	20	250	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SN74HC245PWTG4	ACTIVE	TSSOP	PW	20	250	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	
SNJ54HC245FK	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	N / A for Pkg Type	
SNJ54HC245J	ACTIVE	CDIP	J	20	1	TBD	A42	N / A for Pkg Type	
SNJ54HC245W	ACTIVE	CFP	W	20	1	TBD	Call TI	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.

PACKAGE OPTION ADDENDUM



w.ti.com 23-Mar-2012

(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.

OTHER QUALIFIED VERSIONS OF SN54HC245, SN54HC245-SP, SN74HC245:

Catalog: SN74HC245, SN54HC245

Military: SN54HC245

Space: SN54HC245-SP

NOTE: Qualified Version Definitions:

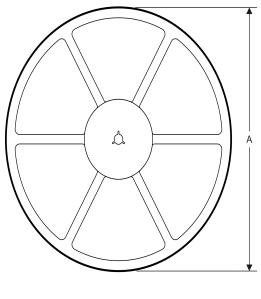
- Catalog TI's standard catalog product
- Military QML certified for Military and Defense Applications
- Space Radiation tolerant, ceramic packaging and qualified for use in Space-based application

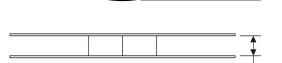
PACKAGE MATERIALS INFORMATION

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TAPE AND REEL INFORMATION

REEL DIMENSIONS





TAPE DIMENSIONS



A0	Dimension designed to accommodate the component width
В0	Dimension designed to accommodate the component length
K0	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

TAPE AND REEL INFORMATION

*All dimensions are nominal

Device	Package Type	Package Drawing		SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
SN74HC245DBR	SSOP	DB	20	2000	330.0	16.4	8.2	7.5	2.5	12.0	16.0	Q1
SN74HC245DWR	SOIC	DW	20	2000	330.0	24.4	10.8	13.0	2.7	12.0	24.0	Q1
SN74HC245NSR	SO	NS	20	2000	330.0	24.4	8.2	13.0	2.5	12.0	24.0	Q1
SN74HC245PWR	TSSOP	PW	20	2000	330.0	16.4	6.95	7.1	1.6	8.0	16.0	Q1
SN74HC245PWR	TSSOP	PW	20	2000	330.0	16.4	6.95	7.1	1.6	8.0	16.0	Q1
SN74HC245PWT	TSSOP	PW	20	250	330.0	16.4	6.95	7.1	1.6	8.0	16.0	Q1

www.ti.com 24-Nov-2011



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
SN74HC245DBR	SSOP	DB	20	2000	346.0	346.0	33.0
SN74HC245DWR	SOIC	DW	20	2000	346.0	346.0	41.0
SN74HC245NSR	SO	NS	20	2000	346.0	346.0	41.0
SN74HC245PWR	TSSOP	PW	20	2000	346.0	346.0	33.0
SN74HC245PWR	TSSOP	PW	20	2000	364.0	364.0	27.0
SN74HC245PWT	TSSOP	PW	20	250	346.0	346.0	33.0

14 LEADS SHOWN



- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- C. This package is hermetically sealed with a ceramic lid using glass frit.
- D. Index point is provided on cap for terminal identification only on press ceramic glass frit seal only.
- E. Falls within MIL STD 1835 GDIP1-T14, GDIP1-T16, GDIP1-T18 and GDIP1-T20.

W (R-GDFP-F20)

CERAMIC DUAL FLATPACK



- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- C. This package can be hermetically sealed with a ceramic lid using glass frit.
- D. Index point is provided on cap for terminal identification only.
- E. Falls within Mil-Std 1835 GDFP2-F20



FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



- A. All linear dimensions are in inches (millimeters).
- B. This drawing is subject to change without notice.
- C. This package can be hermetically sealed with a metal lid.
- D. Falls within JEDEC MS-004



N (R-PDIP-T**)

PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN



- 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).
- The 20 pin end lead shoulder width is a vendor option, either half or full width.



DW (R-PDSO-G20)

PLASTIC SMALL OUTLINE



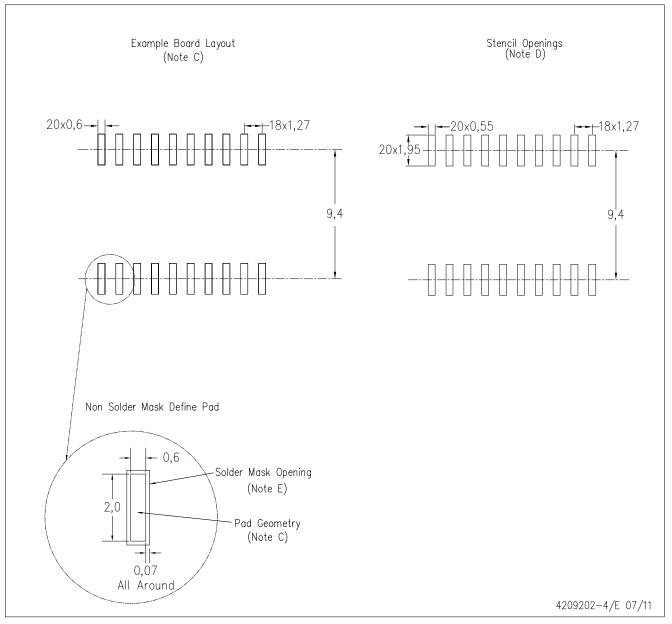
NOTES: A. All linear dimensions are in inches (millimeters). Dimensioning and tolerancing per ASME Y14.5M-1994.

- 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.



DW (R-PDSO-G20)

PLASTIC SMALL OUTLINE



- 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.



PW (R-PDSO-G20)

PLASTIC SMALL OUTLINE



- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M—1994.
- B. This drawing is subject to change without notice.
- Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0,15 each side.
- Body width does not include interlead flash. Interlead flash shall not exceed 0,25 each side.
- E. Falls within JEDEC MO-153



MECHANICAL DATA

NS (R-PDSO-G**)

14-PINS SHOWN

PLASTIC SMALL-OUTLINE PACKAGE



- A. All linear dimensions are in millimeters.
- B. This drawing is subject to change without notice.
- C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15.



DB (R-PDSO-G**)

PLASTIC SMALL-OUTLINE

28 PINS SHOWN



NOTES: A. All linear dimensions are in millimeters.

B. This drawing is subject to change without notice.

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

D. Falls within JEDEC MO-150

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