



TPS370x-xx Processor Supervisory Circuits With Power-Fail

1 Features

- Power-On Reset Generator With Fixed Delay Time of 200 ms (No External Capacitor Needed)
- Precision Supply Voltage Monitor: 2.5 V, 3 V, 3.3 V, and 5 V
- Pin-for-Pin Compatible With the MAX705 Through MAX708 Series
- Integrated Watchdog Time (TPS3705-xx Only)
- Voltage Monitor for Power-Fail or Low-Battery Warning
- Maximum Supply Current of 50 μ A
- 8-Pin MSOP and 8-Pin SOIC Packages
- Temperature Range: -40°C to 85°C

2 Applications

- Designs Using DSPs, Microcontrollers, or Microprocessors
- Industrial Equipment
- Programmable Controls
- Automotive Systems
- Portable or Battery Powered Equipment
- Intelligent Instruments
- Wireless Communication Systems
- Notebook or Desktop Computers

3 Description

The TPS370x-xx family of microprocessor supply-voltage supervisors provide circuit initialization and timing supervision, primarily for DSP and processor-based systems.

During power-on, $\overline{\text{RESET}}$ is asserted when the supply voltage V_{DD} becomes higher than 1.1 V. Thereafter, the supply voltage supervisor monitors V_{DD} and keeps $\overline{\text{RESET}}$ active as long as V_{DD} remains below the threshold voltage $V_{\text{IT}+}$. When the supply voltage drops below the threshold voltage $V_{\text{IT}-}$, the output becomes active (low) again. No external components are required. All the devices of this family have a fixed-sense threshold voltage $V_{\text{IT-}}$ set by an internal voltage divider.

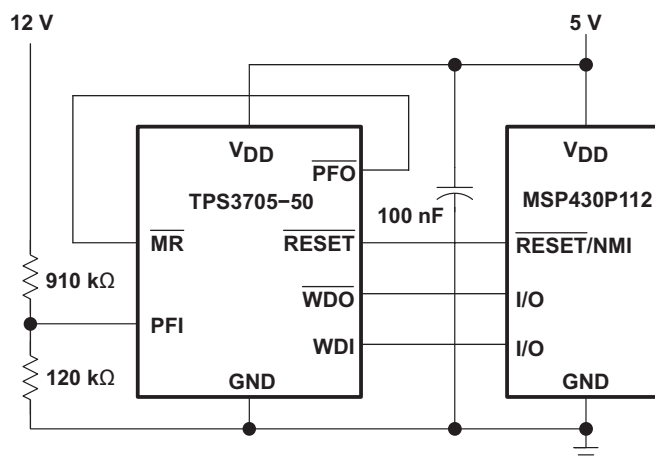
The product spectrum is designed for supply voltages of 2.5 V, 3 V, 3.3 V, and 5 V. The circuits are available in either 8-pin MSOP or standard SOIC packages. The TPS370x-xx devices are characterized for operation over a temperature range of -40°C to 85°C .

Device Information⁽¹⁾

PART NUMBER	PACKAGE	BODY SIZE (NOM)
TPS3705-xx, TPS3707-xx	MSOP- PowerPAD™ (8)	358 mm × 335 mm
	SOIC (8)	367 mm × 367 mm

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

Typical MSP430 Application



Copyright © 2016, Texas Instruments Incorporated



Table of Contents

1 Features	1	8.1 Overview	11
2 Applications	1	8.2 Functional Block Diagram	11
3 Description	1	8.3 Feature Description	11
4 Revision History	2	8.4 Device Functional Modes	12
5 Device Comparison Table	3	9 Application and Implementation	13
6 Pin Configuration and Functions	4	9.1 Application Information	13
7 Specifications	5	9.2 Typical Application	13
7.1 Absolute Maximum Ratings	5	10 Power Supply Recommendations	14
7.2 ESD Ratings	5	11 Layout	14
7.3 Recommended Operating Conditions	5	11.1 Layout Guidelines	14
7.4 Thermal Information	6	11.2 Layout Example	14
7.5 Electrical Characteristics	6	12 Device and Documentation Support	15
7.6 Timing Requirements	7	12.1 Community Resources	15
7.7 Switching Characteristics	7	12.2 Trademarks	15
7.8 Dissipation Ratings	8	12.3 Electrostatic Discharge Caution	15
7.9 Typical Characteristics	9	12.4 Glossary	15
8 Detailed Description	11	13 Mechanical, Packaging, and Orderable Information	15

4 Revision History

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

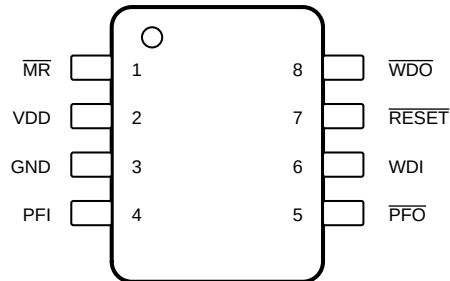
Changes from Revision C (December 2005) to Revision D	Page
Added <i>ESD Ratings</i> table, <i>Feature Description</i> section, <i>Device Functional Modes</i>, <i>Application and Implementation</i> section, <i>Power Supply Recommendations</i> section, <i>Layout</i> section, <i>Device and Documentation Support</i> section, and <i>Mechanical, Packaging, and Orderable Information</i> section	1

5 Device Comparison Table

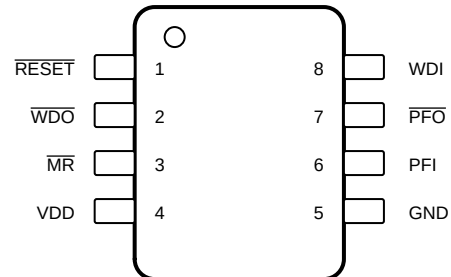
T_A	THRESHOLD VOLTAGE	PACKAGED DEVICES		MARKING DGN PACKAGE	CHIP FORM (Y)
		SMALL OUTLINE (D)	POWER-PAD μ -SMALL OUTLINE (DGN)		
–40°C to 85°C	2.63 V	TPS3705–30D	TPS3705–30DGN	TIAAT	TPS3705–30Y
	2.93 V	TPS3705–33D	TPS3705–33DGN	TIAAU	TPS3705–33Y
	4.55 V	TPS3705–50D	TPS3705–50DGN	TIAAV	TPS3705–50Y
	2.25 V	TPS3707–25D	TPS3707–25DGN	TIAAW	TPS3707–25Y
	2.63 V	TPS3707–30D	TPS3707–30DGN	TIAAX	TPS3707–30Y
	2.93 V	TPS3707–33D	TPS3707–33DGN	TIAAY	TPS3707–33Y
	4.55 V	TPS3707–50D	TPS3707–50DGN	TIAAZ	TPS3707–50Y

6 Pin Configuration and Functions

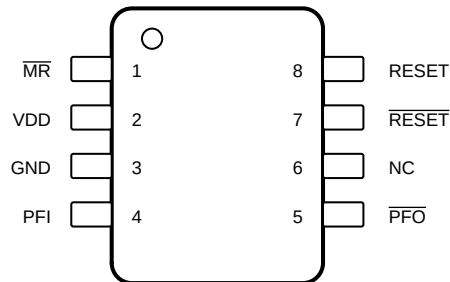
TPS3705-xx D Package
8-Pin SOIC
Top View



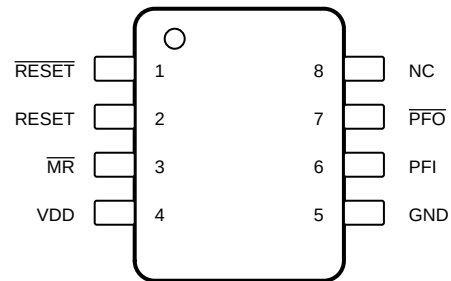
TPS3705-xx DGN Package
8-Pin MSOP-PowerPAD
Top View



TPS3707-xx D Package
8-Pin SOIC
Top View



TPS3707-xx DGN Package
8-Pin MSOP-PowerPAD
Top View



Pin Functions

PIN					I/O	DESCRIPTION
NAME	TPS3705-xx		TPS3707-xx			
	SOIC	MSOP-PowerPAD	SOIC	MSOP-PowerPAD		
GND	3	5	3	5	—	Ground
$\overline{\text{MR}}$	1	3	1	3	I	Manual reset
NC	—	—	6	8	—	No internal connection
PFI	4	6	4	6	I	Power-fail comparator input
$\overline{\text{PFO}}$	5	7	5	7	O	Power-fail comparator output
$\overline{\text{RESET}}$	7	1	7	1	O	Active-low reset output
RESET	—	—	8	2	O	Active-high reset output
V _{DD}	2	4	2	4	—	Supply voltage
WDI	6	8	—	—	I	Watchdog timer input
$\overline{\text{WDO}}$	8	2	—	—	O	Watchdog timer output

7 Specifications

7.1 Absolute Maximum Ratings

over operating free-air temperature range (unless otherwise noted)⁽¹⁾

	MIN	MAX	UNIT
Supply voltage, V_{DD} ⁽²⁾		7	V
PFI voltage range, V_{PFI}	−0.3	$V_{DD} + 0.3$	V
All other pins ⁽²⁾	−0.3	7	V
Maximum low output current, I_{OL}		5	mA
Maximum high output current, I_{OH}		−5	mA
Input clamp current, I_{IK} ($V_I < 0$ or $V_I > V_{DD}$)		±20	mA
Output clamp current, I_{OK} ($V_O < 0$ or $V_O > V_{DD}$)		±20	mA
Continuous total power dissipation	See Dissipation Ratings		
Soldering temperature		260	°C
Operating temperature, T_A	−40	85	°C
Storage temperature, T_{stg}	−65	150	°C

- (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) All voltage values are with respect to GND. For reliable operation the device must not be operated at 7 V for more than $t = 1000h$ continuously.

7.2 ESD Ratings

		VALUE	UNIT
$V_{(ESD)}$ Electrostatic discharge	Human-body model (HBM), per ANSI/ESDA/JEDEC JS-001 ⁽¹⁾	±2000	V
	Charged-device model (CDM), per JEDEC specification JESD22-C101 ⁽²⁾	±500	

- (1) JEDEC document JEP155 states that 500-V HBM allows safe manufacturing with a standard ESD control process.
- (2) JEDEC document JEP157 states that 250-V CDM allows safe manufacturing with a standard ESD control process.

7.3 Recommended Operating Conditions

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

	MIN	NOM	MAX	UNIT
V_{DD} Supply voltage	2		6	V
V_I Input voltage	0		$V_{DD} + 0.3$	V
V_{IH} High-level input voltage	$0.7 \times V_{DD}$			V
V_{IL} Low-level input voltage			$0.3 \times V_{DD}$	V
$\Delta t/\Delta V$ Input transition rise and fall rate at $\overline{MR}$ or WDI			100	ns/V
T_A Operating free-air temperature	−40		85	°C

7.4 Thermal Information

THERMAL METRIC ⁽¹⁾		TPS3705-xx	TPS3707-xx	UNIT
		D (SOIC)	DGN (MSOP-PowerPAD)	
		8 PINS	8 PINS	
R _{θJA}	Junction-to-ambient thermal resistance	118.2	66.1	°C/W
R _{θJC(top)}	Junction-to-case (top) thermal resistance	64.4	62.6	°C/W
R _{θJB}	Junction-to-board thermal resistance	58.5	45.1	°C/W
ψ _{JT}	Junction-to-top characterization parameter	15.8	7.6	°C/W
ψ _{JB}	Junction-to-board characterization parameter	57.9	44.8	°C/W
R _{θJC(bot)}	Junction-to-case (bottom) thermal resistance	—	18.5	°C/W

(1) For more information about traditional and new thermal metrics, see the *Semiconductor and IC Package Thermal Metrics* application report, [SPRA953](#).

7.5 Electrical Characteristics

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

PARAMETER		TEST CONDITIONS	MIN	TYP	MAX	UNIT	
V _{OH}	High-level output voltage	TPS370x-xx, V _{DD} = 1.1 V, I _{OH} = −4 μA	0.8			V	
		TPS3707-25, TPS370x-30, TPS370x-33, V _{DD} = V _{IT+} + 0.2 V, I _{OH} = −500 μA	0.7 × V _{DD}				
		TPS370x-50, V _{DD} = V _{IT+} + 0.2 V, I _{OH} = −800 μA	V _{DD} − 1.5				
		TPS370x-xx, V _{DD} = 6 V, I _{OH} = −800 μA	V _{DD} − 1.5				
V _{OL}	Low-level output voltage	TPS3707-25, TPS370x-30, TPS370x-33, V _{DD} = V _{IT+} + 0.2 V, I _{OL} = 1 mA	0.3			V	
		TPS370x-50, V _{DD} = V _{IT+} + 0.2 V, I _{OL} = 2.5 mA	0.4				
		TPS370x-xx, V _{DD} = 6 V, I _{OL} = 3 mA	0.4				
Power-up reset voltage ⁽¹⁾		V _{DD} ≥ 1.1 V, I _{OL} = 50 μA	0.3			V	
V _{IT−}	Negative-going input threshold voltage ⁽²⁾	TPS3707-25, T _A = 0°C to 85°C	2.2	2.25	2.3	V	
		TPS370x-30, T _A = 0°C to 85°C	2.57	2.63	2.68		
		TPS370x-33, T _A = 0°C to 85°C	2.87	2.93	2.98		
		TPS370x-50, T _A = 0°C to 85°C	4.45	4.55	4.63		
		TPS3707-25, T _A = −40°C to 85°C	2.2	2.25	2.32		
		TPS370x-30, T _A = −40°C to 85°C	2.57	2.63	2.7		
		TPS370x-33, T _A = −40°C to 85°C	2.87	2.93	3		
		TPS370x-50, T _A = −40°C to 85°C	4.45	4.55	4.65		
	Negative-going input threshold voltage, PFI ⁽²⁾		TPS370x-xx, V _{DD} ≥ 2 V, T _A = −40°C to 85°C	1.2	1.25	1.3	
V _{hys}	Hysteresis, V _{DD}	TPS3707-25	40			mV	
		TPS370x-30	50				
		TPS370x-33	50				
		TPS370x-50	70				
	Hysteresis, PFI		TPS370x-xx	10			
I _{IH(AV)}	Average high-level input current, WDI	WDI = V _{DD} = 6 V, time average (dc = 88%)	100			150	μA
I _{IL(AV)}	Average low-level input current, WDI	WDI = 0 V, V _{DD} = 6 V, time average (dc = 12%)	−15			−20	μA
I _{IH}	High-level input current, WDI	WDI = V _{DD} = 6 V	120			170	μA
	High-level input current, $\overline{MR}$	$\overline{MR}$ = 0.7 × V _{DD} , V _{DD} = 6 V	−130			−180	
I _{IL}	Low-level input current, WDI	WDI = 0 V, V _{DD} = 6 V	−120			−170	μA
	Low-level input current, $\overline{MR}$	$\overline{MR}$ = 0 V, V _{DD} = 6 V	−430			−600	
I _I	Input current, PFI	V _{DD} = 6 V, 0 V ≤ V _I ≤ V _{DD}	−1	0	1	μA	

(1) The lowest supply voltage at which $\overline{RESET}$ becomes active, t_{r, VDD} ≥ 15 μs/V

(2) To ensure best stability of the threshold voltage, a bypass capacitor (ceramic, 0.1 μF) should be placed near to the supply terminals

Electrical Characteristics (continued)

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

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
I_{DD} Supply current	TPS3705-xx, $V_{DD} = 2\text{ V to }6\text{ V}$, $\overline{MR} = V_{DD}$, $\overline{MR}$, $\overline{WDI}$ and outputs unconnected		30	50	μA
	TPS3707-xx, $V_{DD} = 2\text{ V to }6\text{ V}$, $\overline{MR} = V_{DD}$, $\overline{MR}$, $\overline{WDI}$ and outputs unconnected		20	50	
C_i Input capacitance	$V_i = 0\text{ V to }V_{DD}$		5		pF

7.6 Timing Requirements

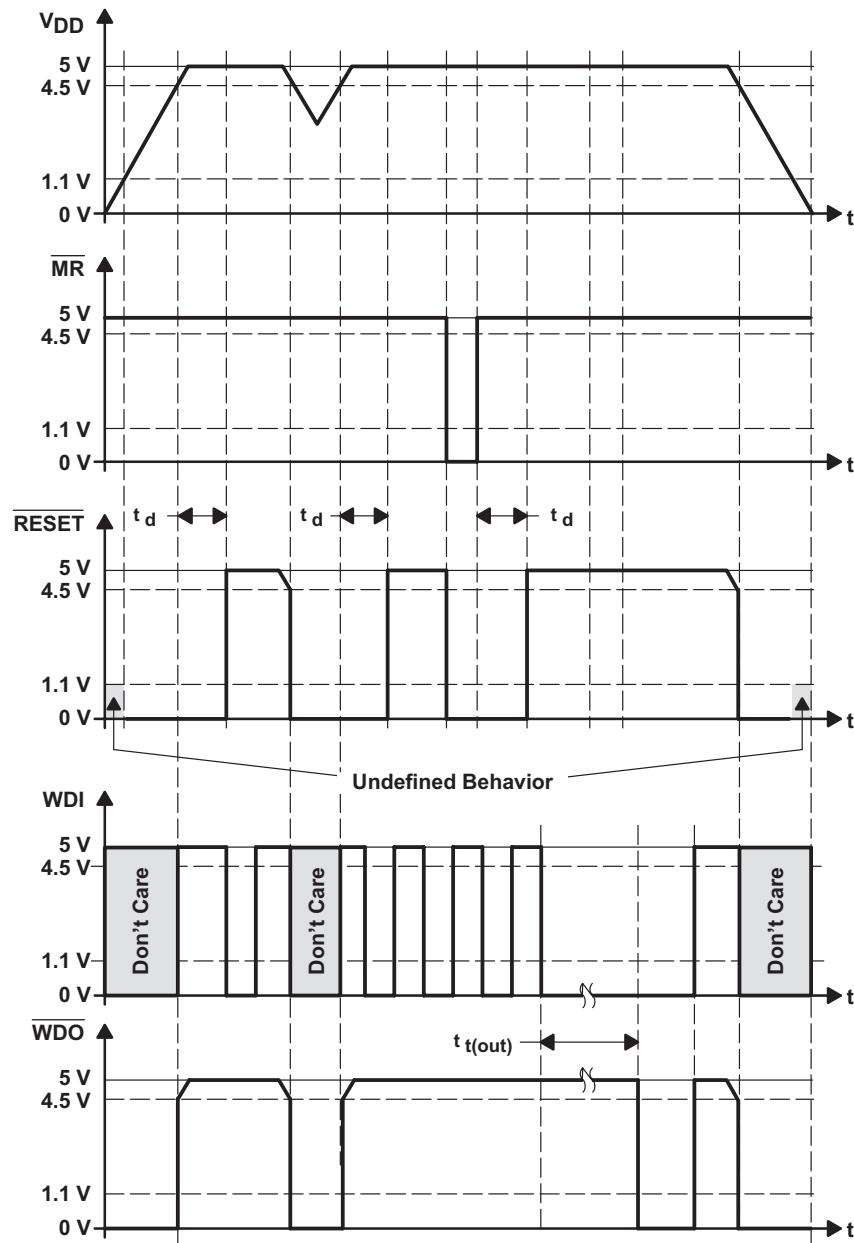
at $R_L = 1\text{ M}\Omega$, $C_L = 50\text{ pF}$, $T_A = 25^\circ\text{C}$ (unless otherwise noted)

PARAMETER	TEST CONDITIONS	MIN	NOM	MAX	UNIT
t_w Pulse width	At V_{DD} , $V_{DD} = V_{IT+} + 0.2\text{ V}$, $V_{DD} = V_{IT-} - 0.2\text{ V}$	6			μs
	At $\overline{MR}$ and $\overline{WDI}$, $V_{DD} \geq V_{IT+} + 0.2\text{ V}$, $V_{IL} = 0.3 \times V_{DD}$, $V_{IH} = 0.7 \times V_{DD}$	100			ns

7.7 Switching Characteristics

at $R_L = 1\text{ M}\Omega$, $C_L = 50\text{ pF}$, $T_A = 25^\circ\text{C}$ (unless otherwise noted)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
$t_{t(out)}$ Watchdog time out	$V_{DD} \geq V_{IT+} + 0.2\text{ V}$, see Figure 1	1.1	1.6	2.3	s
t_d Delay time	$V_{DD} \geq V_{IT+} + 0.2\text{ V}$, see Figure 1	140	200	280	ms
t_{PHL} Propagation (delay) time, high-to-low-level output	$\overline{MR}$ to $\overline{RESET}$ delay, $V_{DD} \geq V_{IT+} + 0.2\text{ V}$, $V_{IL} = 0.3 \times V_{DD}$, $V_{IH} = 0.7 \times V_{DD}$		50	250	ns
t_{PLH} Propagation (delay) time, low-to-high-level output	$\overline{MR}$ to $\overline{RESET}$ delay (TPS3707-xx only) $V_{DD} \geq V_{IT+} + 0.2\text{ V}$, $V_{IL} = 0.3 \times V_{DD}$, $V_{IH} = 0.7 \times V_{DD}$		50	250	ns
t_{PHL} Propagation (delay) time, high-to-low-level output	V_{DD} to $\overline{RESET}$ delay		3	5	μs
t_{PLH} Propagation (delay) time, low-to-high-level output	V_{DD} to $\overline{RESET}$ delay (TPS3707-xx only)		3	5	μs
t_{PHL} Propagation (delay) time, high-to-low-level output	PFI to $\overline{PFO}$ delay, $V_{DD} = 2\text{ V to }6\text{ V}$		0.5	1	μs
t_{PLH} Propagation (delay) time, low-to-high-level output	PFI to $\overline{PFO}$ delay, $V_{DD} = 2\text{ V to }6\text{ V}$		0.5	1	μs


Figure 1. Timing Diagrams

7.8 Dissipation Ratings

PACKAGE	$T_A < 25^\circ\text{C}$ POWER RATING	DERATING FACTOR ABOVE $T_A = 25^\circ\text{C}$	$T_A = 70^\circ\text{C}$ POWER RATING	$T_A = 85^\circ\text{C}$ POWER RATING
DGN	2.14 W	17.1 mW/ $^\circ\text{C}$	1.37 W	1.11 W
D	725 mW	5.8 mW/ $^\circ\text{C}$	464 mW	377 mW

7.9 Typical Characteristics

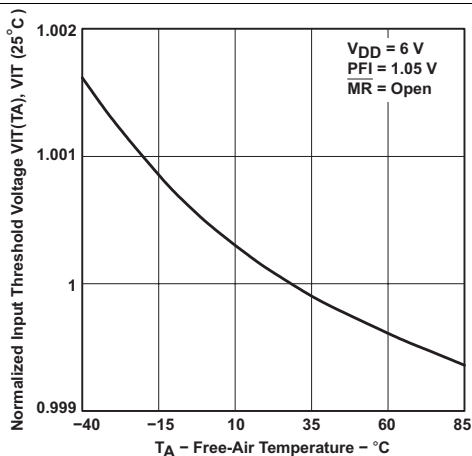


Figure 2. Normalized Input Threshold Voltage vs Free-Air Temperature at V_{DD}

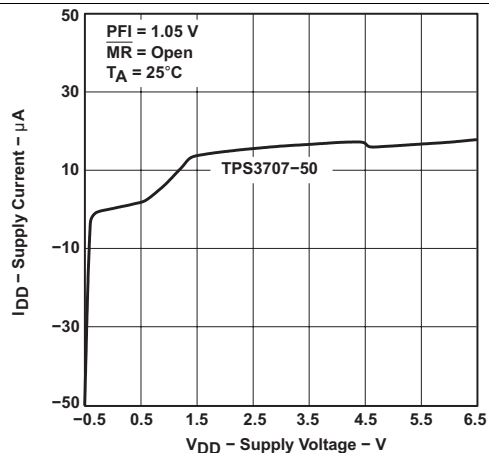


Figure 3. Supply Current vs Supply Voltage

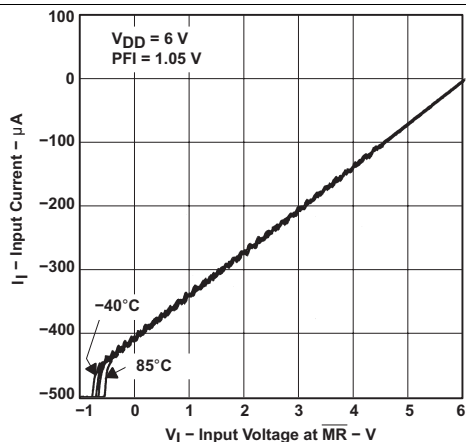


Figure 4. Input Current vs Input Voltage at $\overline{MR}$

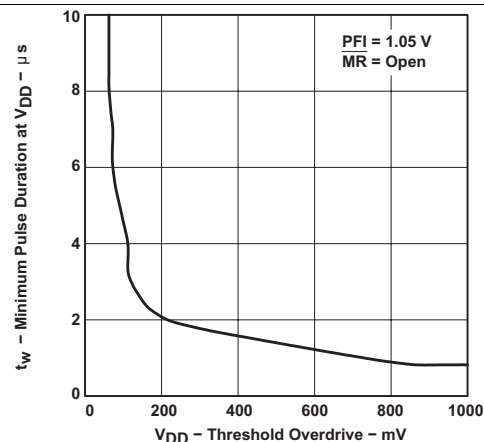


Figure 5. Minimum Pulse Duration at V_{DD} vs V_{DD} Threshold Overdrive

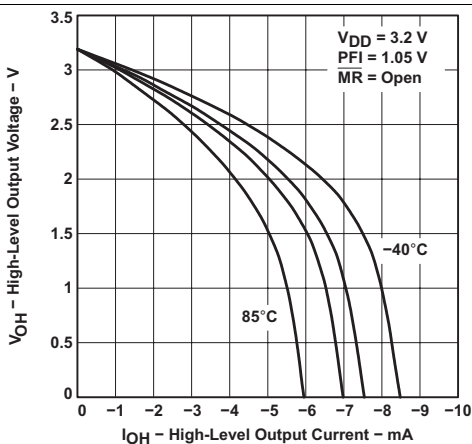


Figure 6. High-Level Output Voltage vs High-Level Output Current

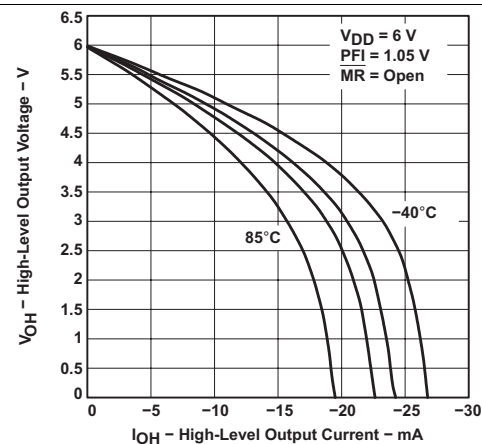


Figure 7. High-Level Output Voltage vs High-Level Output Current

Typical Characteristics (continued)

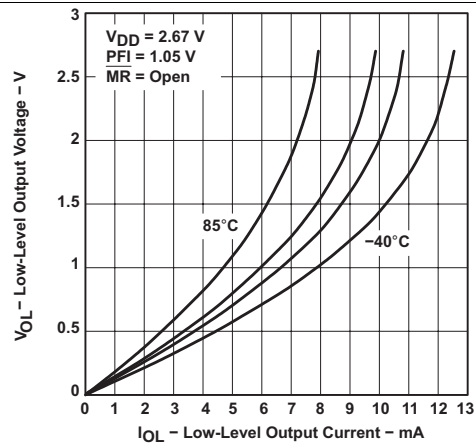


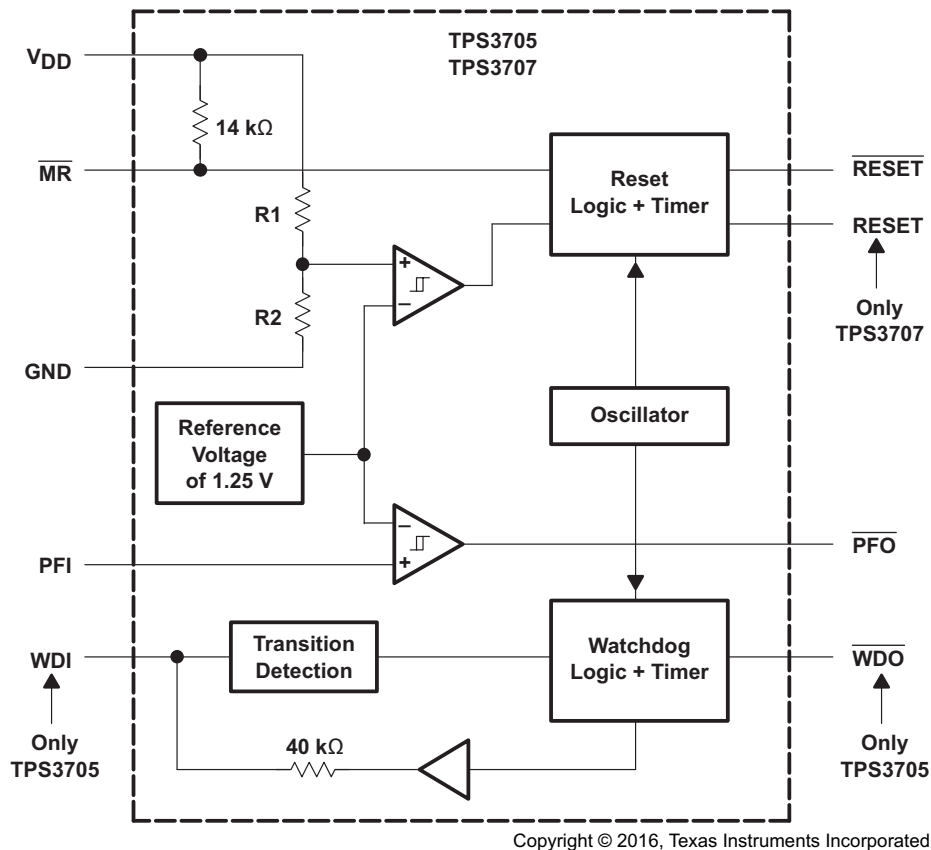
Figure 8. Low-Level Output Voltage vs Low-Level Output Current

8 Detailed Description

8.1 Overview

The TPS370x-xx family of supervisors feature an integrated reference and comparator for V_{DD} supervision, an additional power-fail supervisor, and a manual reset input. The TPS3705-xx devices feature a watchdog timer, where the TPS3707-xx devices feature a complimentary RESET output.

8.2 Functional Block Diagram



8.3 Feature Description

8.3.1 Manual Reset Input

The TPS370x-xx devices incorporate a manual reset input, $\overline{MR}$. A low level at $\overline{MR}$ causes $\overline{RESET}$ to become active.

8.3.2 Power-Fail Comparator

The TPS370x-xx family integrates a power-fail comparator which can be used for low-battery detection, power-fail warning, or for monitoring a power supply other than the main supply.

8.3.3 Watchdog Timer

The TPS3705-xx devices have a watchdog timer that is periodically triggered by a positive or negative transition at WDI . When the supervising system fails to retrigger the watchdog circuit within the timeout interval, $t_{t(out)} = 1.6\text{ s}$, $\overline{WDO}$ becomes active. This event also reinitializes the watchdog timer. Leaving WDI unconnected disables the watchdog.

The TPS3707-xx devices do not have the watchdog function, but include a high-level output $\overline{RESET}$.

8.4 Device Functional Modes

8.4.1 $V_{DD} < 1.1\text{ V}$

When V_{DD} is less than 1.1 V, the status of the outputs cannot be determined.

8.4.2 $1.1\text{ V} < V_{DD} \leq 2\text{ V}$

When V_{DD} is greater than 1.1 V but less than 2 V, the output states are valid. However, the specifications in [Electrical Characteristics](#) do not apply.

8.4.3 $2\text{ V} < V_{DD} < 6\text{ V}$

When V_{DD} is greater than 2 V but less than 6 V, the device is within the recommended operating conditions (see [Recommended Operating Conditions](#)). See [Table 1](#), [Table 2](#), and [Table 3](#) for corresponding truth tables.

Table 1. TPS3705 Truth Table

$\overline{\text{MR}}$	$V_{DD} > V_{IT}$	$\overline{\text{RESET}}$	TYPICAL DELAY
H $\rightarrow$ L	1	H $\rightarrow$ L	30 ns
L $\rightarrow$ H	1	L $\rightarrow$ H	200 ms
H	1 $\rightarrow$ 0	H $\rightarrow$ L	3 μ s
H	0 $\rightarrow$ 1	L $\rightarrow$ H	200 ms

Table 2. TPS3707 Truth Table

$\overline{\text{MR}}$	$V_{DD} > V_{IT}$	$\overline{\text{RESET}}$	RESET	TYPICAL DELAY
H $\rightarrow$ L	1	H $\rightarrow$ L	L $\rightarrow$ H	30 ns
L $\rightarrow$ H	1	L $\rightarrow$ H	H $\rightarrow$ L	200 ms
H	1 $\rightarrow$ 0	H $\rightarrow$ L	L $\rightarrow$ H	3 μ s
H	0 $\rightarrow$ 1	L $\rightarrow$ H	H $\rightarrow$ L	200 ms

Table 3. TPS370x Truth Table

$\text{PFI} > V_{IT}$	$\overline{\text{PFO}}$	TYPICAL DELAY
0 $\rightarrow$ 1	L $\rightarrow$ H	0.5 μ s
1 $\rightarrow$ 0	H $\rightarrow$ L	0.5 μ s

9 Application and Implementation

NOTE

Information in the following applications sections is not part of the TI component specification, and TI does not warrant its accuracy or completeness. TI's customers are responsible for determining suitability of components for their purposes. Customers should validate and test their design implementation to confirm system functionality.

9.1 Application Information

The TPS370x-xx family of devices offers several options for power monitoring. The TPS3705-xx offers a watchdog supervisor, V_{DD} rail monitoring, and a power-fail interrupt monitor. The TPS3707-xx offers V_{DD} rail monitoring with complimentary outputs and a power-fail interrupt monitor.

9.2 Typical Application

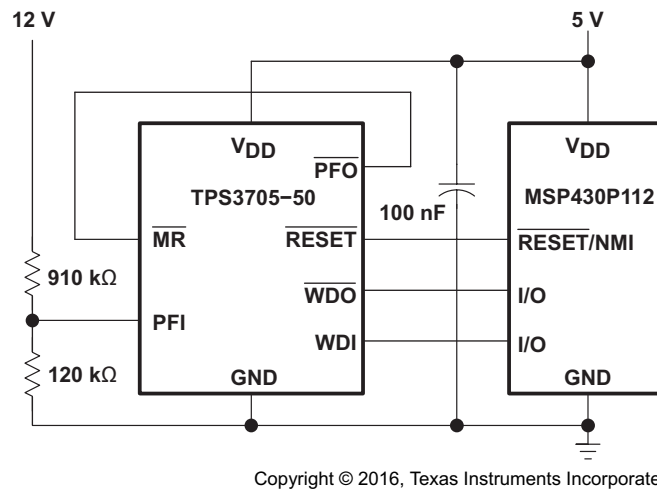


Figure 9. Typical MSP430 Application

9.2.1 Design Requirements

Table 4 lists the required design parameters for Figure 9.

Table 4. Application Parameters

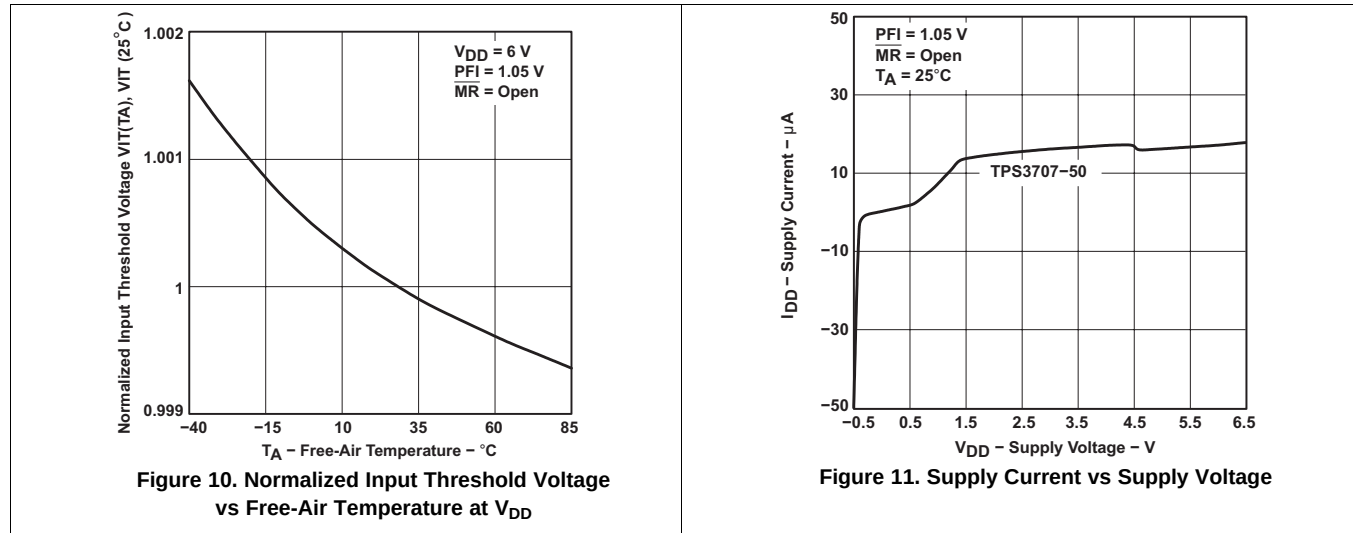
DESIGN PARAMETER	VALUE
Monitored voltage 1	5 V
Monitored voltage 2	12 V

9.2.2 Detailed Design Procedure

To create two voltage monitoring rails, the PFI input can be used along with the MR pin to create a single output. The 5-V monitor is created by selecting a 5-V device option, giving threshold of 4.55 V. The PFI input is configured to any adjustable rail with a voltage divider. Use Equation 1 to select resistors.

$$V_{TH} = \frac{R_1 + R_2}{R_2} \times V_{IT-} = \frac{910 \text{ k} + 120 \text{ k}}{120 \text{ k}} \times 1.25 = 10.73 \text{ V} \quad (1)$$

9.2.3 Application Curves



10 Power Supply Recommendations

These devices are designed to operate from an input supply with a voltage range from 2 V to 6 V.

11 Layout

11.1 Layout Guidelines

Place a 0.1- μ F decoupling capacitor as close to the device as possible.

If a resistor divider is used, place the resistors as close to the device as possible to minimize noise coupling.

11.2 Layout Example

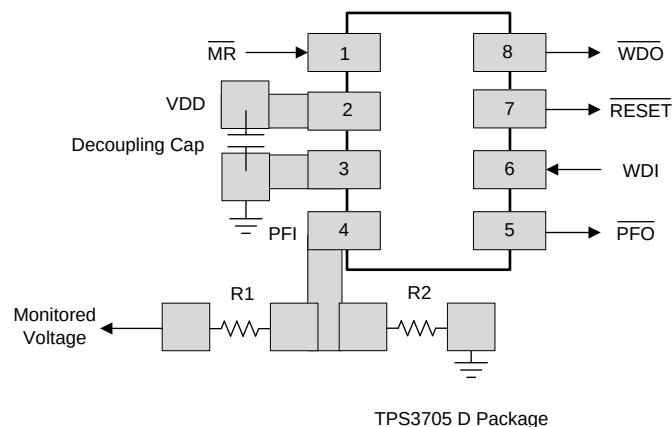


Figure 12. TPS3705 Layout

12 Device and Documentation Support

12.1 Community Resources

The following links connect to TI community resources. Linked contents are provided "AS IS" by the respective contributors. They do not constitute TI specifications and do not necessarily reflect TI's views; see TI's [Terms of Use](#).

TI E2E™ Online Community *TI's Engineer-to-Engineer (E2E) Community*. Created to foster collaboration among engineers. At e2e.ti.com, you can ask questions, share knowledge, explore ideas and help solve problems with fellow engineers.

Design Support *TI's Design Support* Quickly find helpful E2E forums along with design support tools and contact information for technical support.

12.2 Trademarks

PowerPAD, E2E are trademarks of Texas Instruments.
All other trademarks are the property of their respective owners.

12.3 Electrostatic Discharge Caution



These devices have limited built-in ESD protection. The leads should be shorted together or the device placed in conductive foam during storage or handling to prevent electrostatic damage to the MOS gates.

12.4 Glossary

[SLYZ022](#) — *TI Glossary*.

This glossary lists and explains terms, acronyms, and definitions.

13 Mechanical, Packaging, and Orderable Information

The following pages include mechanical, packaging, and orderable information. This information is the most current data available for the designated devices. This data is subject to change without notice and revision of this document. For browser-based versions of this data sheet, refer to the left-hand navigation.

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TPS3705-30D	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70530	Samples
TPS3705-30DGN	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAT	Samples
TPS3705-30DR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70530	Samples
TPS3705-30DRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70530	Samples
TPS3705-33D	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70533	Samples
TPS3705-33DG4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70533	Samples
TPS3705-33DGN	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAU	Samples
TPS3705-33DGNG4	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAU	Samples
TPS3705-33DGNR	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAU	Samples
TPS3705-33DGNRG4	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAU	Samples
TPS3705-33DR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70533	Samples
TPS3705-33DRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70533	Samples
TPS3705-50D	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70550	Samples
TPS3705-50DG4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70550	Samples
TPS3705-50DGN	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAV	Samples
TPS3705-50DGNG4	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAV	Samples
TPS3705-50DGNR	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAV	Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TPS3705-50DR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70550	Samples
TPS3705-50DRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70550	Samples
TPS3707-25D	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70725	Samples
TPS3707-25DG4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70725	Samples
TPS3707-25DGN	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAW	Samples
TPS3707-25DGNG4	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAW	Samples
TPS3707-25DGNR	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAW	Samples
TPS3707-25DGNRG4	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAW	Samples
TPS3707-25DR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70725	Samples
TPS3707-30D	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70730	Samples
TPS3707-30DG4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70730	Samples
TPS3707-30DGN	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAX	Samples
TPS3707-30DGNR	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAX	Samples
TPS3707-30DR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70730	Samples
TPS3707-33D	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70733	Samples
TPS3707-33DG4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70733	Samples
TPS3707-33DGN	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAY	Samples
TPS3707-33DGNG4	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAY	Samples

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
TPS3707-33DGNR	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAY	Samples
TPS3707-33DGNRG4	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAY	Samples
TPS3707-33DR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70733	Samples
TPS3707-33DRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70733	Samples
TPS3707-50D	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70750	Samples
TPS3707-50DG4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70750	Samples
TPS3707-50DGN	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAZ	Samples
TPS3707-50DGNG4	ACTIVE	MSOP- PowerPAD	DGN	8	80	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAZ	Samples
TPS3707-50DGNR	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAZ	Samples
TPS3707-50DGNRG4	ACTIVE	MSOP- PowerPAD	DGN	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	AAZ	Samples
TPS3707-50DR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70750	Samples
TPS3707-50DRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM	-40 to 85	70750	Samples

(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.

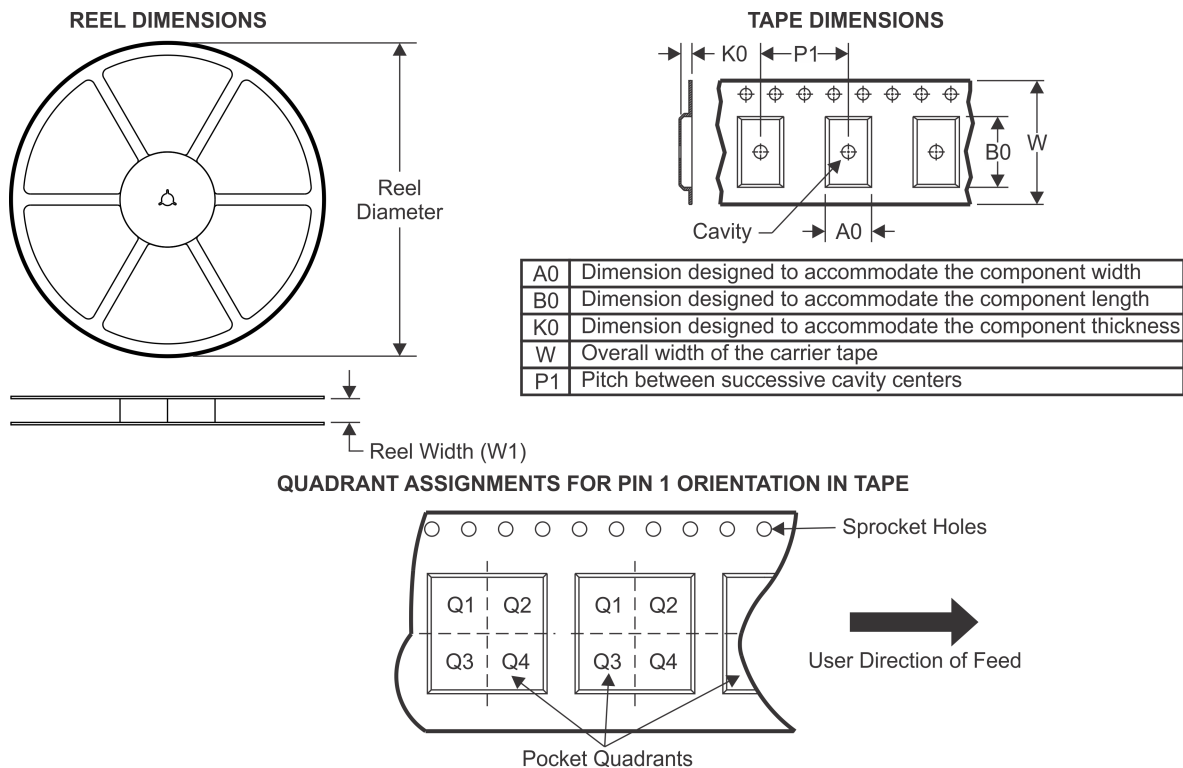
⁽⁴⁾ There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.

⁽⁵⁾ Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

⁽⁶⁾ Lead/Ball Finish - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead/Ball Finish values may wrap to two lines if the finish value exceeds the maximum column width.

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.

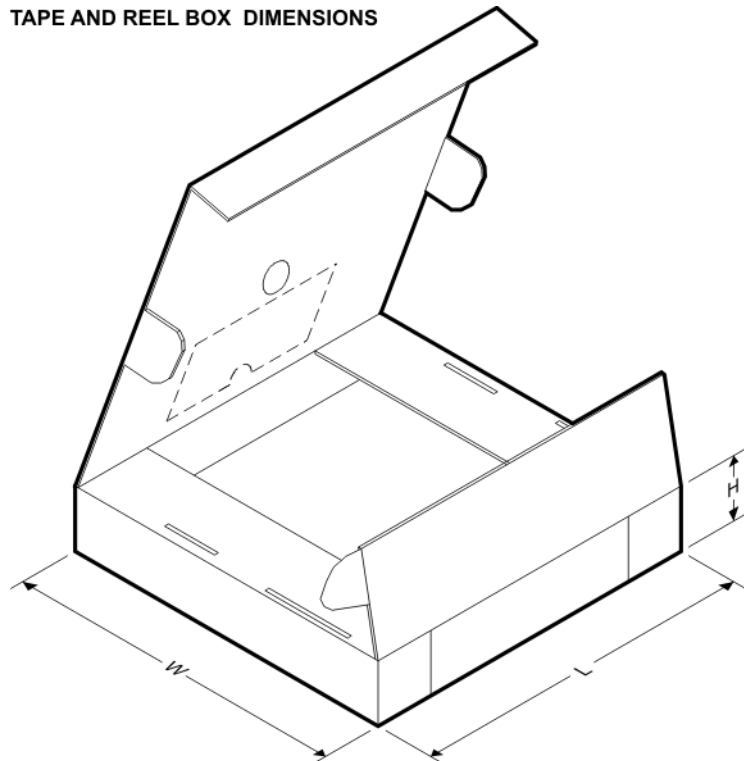
In no event shall TI's liability arising out of such information exceed the total purchase price of the TI part(s) at issue in this document sold by TI to Customer on an annual basis.

TAPE AND REEL INFORMATION


*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
TPS3705-30DR	SOIC	D	8	2500	330.0	12.4	6.4	5.2	2.1	8.0	12.0	Q1
TPS3705-33DGNR	MSOP-Power PAD	DGN	8	2500	330.0	12.4	5.3	3.4	1.4	8.0	12.0	Q1
TPS3705-33DR	SOIC	D	8	2500	330.0	12.4	6.4	5.2	2.1	8.0	12.0	Q1
TPS3705-50DGNR	MSOP-Power PAD	DGN	8	2500	330.0	12.4	5.3	3.4	1.4	8.0	12.0	Q1
TPS3705-50DR	SOIC	D	8	2500	330.0	12.4	6.4	5.2	2.1	8.0	12.0	Q1
TPS3707-25DGNR	MSOP-Power PAD	DGN	8	2500	330.0	12.4	5.3	3.4	1.4	8.0	12.0	Q1
TPS3707-25DR	SOIC	D	8	2500	330.0	12.4	6.4	5.2	2.1	8.0	12.0	Q1
TPS3707-30DGNR	MSOP-Power PAD	DGN	8	2500	330.0	12.4	5.3	3.4	1.4	8.0	12.0	Q1
TPS3707-30DR	SOIC	D	8	2500	330.0	12.4	6.4	5.2	2.1	8.0	12.0	Q1
TPS3707-30DR	SOIC	D	8	2500	330.0	12.4	6.4	5.2	2.1	8.0	12.0	Q1
TPS3707-33DGNR	MSOP-Power PAD	DGN	8	2500	330.0	12.4	5.3	3.4	1.4	8.0	12.0	Q1

Device	Package Type	Package Drawing	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
TPS3707-33DR	SOIC	D	8	2500	330.0	12.4	6.4	5.2	2.1	8.0	12.0	Q1
TPS3707-50DGNR	MSOP-Power PAD	DGN	8	2500	330.0	12.4	5.3	3.4	1.4	8.0	12.0	Q1
TPS3707-50DR	SOIC	D	8	2500	330.0	12.4	6.4	5.2	2.1	8.0	12.0	Q1

TAPE AND REEL BOX DIMENSIONS


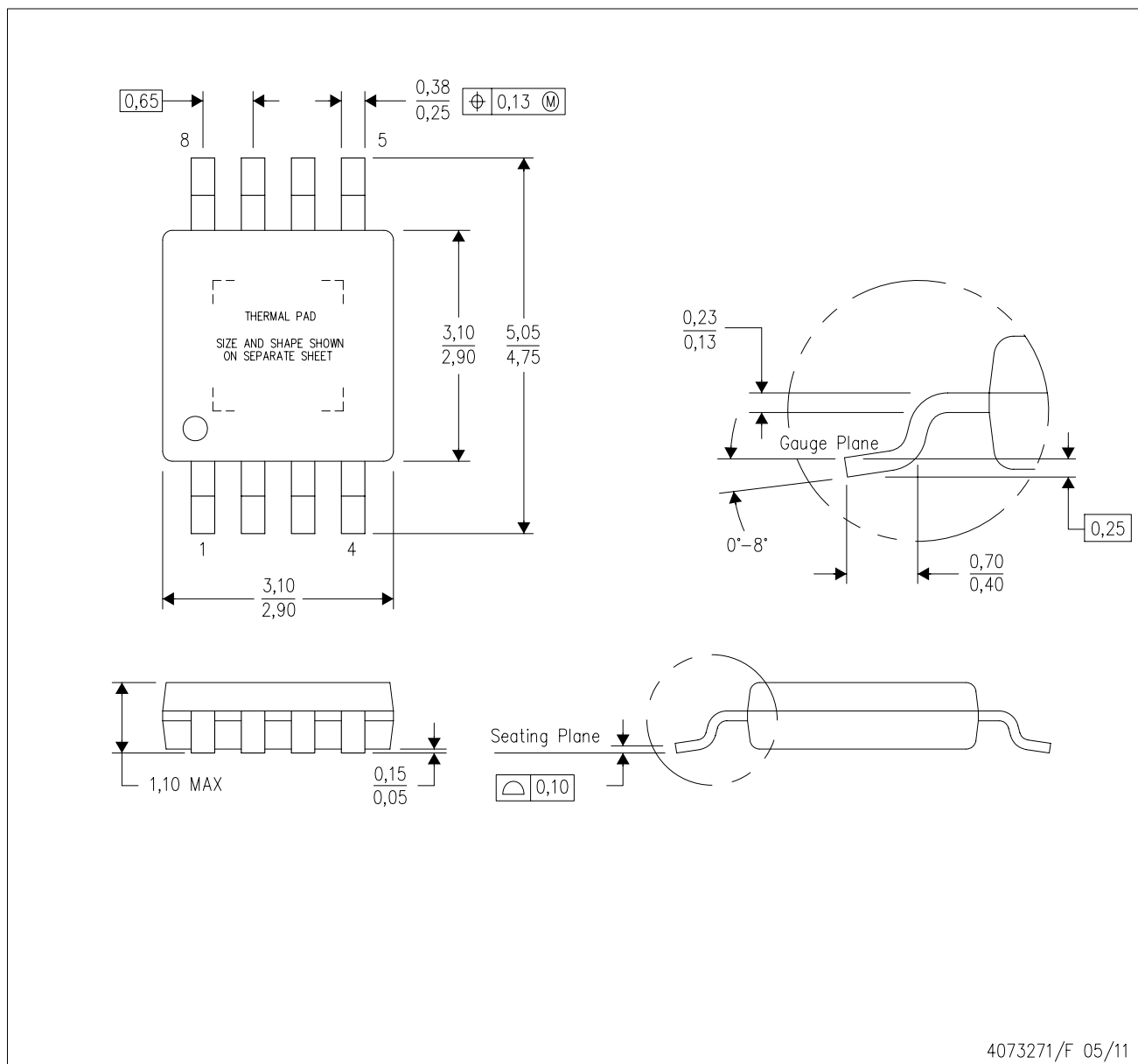
*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
TPS3705-30DR	SOIC	D	8	2500	367.0	367.0	38.0
TPS3705-33DGNR	MSOP-PowerPAD	DGN	8	2500	358.0	335.0	35.0
TPS3705-33DR	SOIC	D	8	2500	367.0	367.0	38.0
TPS3705-50DGNR	MSOP-PowerPAD	DGN	8	2500	358.0	335.0	35.0
TPS3705-50DR	SOIC	D	8	2500	367.0	367.0	38.0
TPS3707-25DGNR	MSOP-PowerPAD	DGN	8	2500	358.0	335.0	35.0
TPS3707-25DR	SOIC	D	8	2500	367.0	367.0	38.0
TPS3707-30DGNR	MSOP-PowerPAD	DGN	8	2500	358.0	335.0	35.0
TPS3707-30DR	SOIC	D	8	2500	367.0	367.0	35.0
TPS3707-30DR	SOIC	D	8	2500	367.0	367.0	38.0
TPS3707-33DGNR	MSOP-PowerPAD	DGN	8	2500	358.0	335.0	35.0
TPS3707-33DR	SOIC	D	8	2500	367.0	367.0	38.0

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
TPS3707-50DGNR	MSOP-PowerPAD	DGN	8	2500	358.0	335.0	35.0
TPS3707-50DR	SOIC	D	8	2500	367.0	367.0	38.0

DGN (S-PDSO-G8)

PowerPAD™ PLASTIC SMALL OUTLINE



- NOTES:
- All linear dimensions are in millimeters.
 - This drawing is subject to change without notice.
 - Body dimensions do not include mold flash or protrusion.
 - This package is designed to be soldered to a thermal pad on the board. Refer to Technical Brief, PowerPad Thermally Enhanced Package, Texas Instruments Literature No. SLMA002 for information regarding recommended board layout. This document is available at www.ti.com <<http://www.ti.com>>.
 - See the additional figure in the Product Data Sheet for details regarding the exposed thermal pad features and dimensions.
 - Falls within JEDEC MO-187 variation AA-T

PowerPAD is a trademark of Texas Instruments.

DGN (S-PDSO-G8)

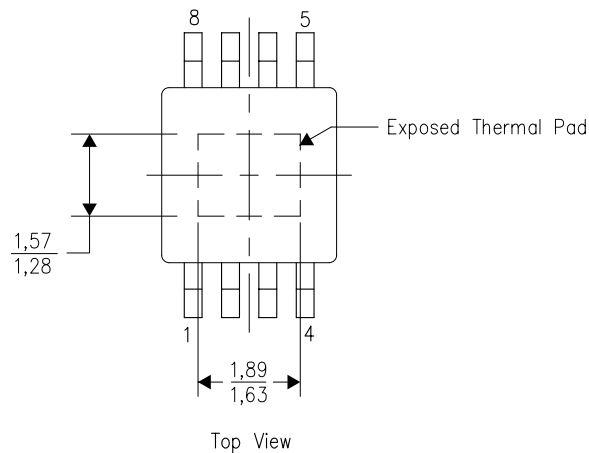
PowerPAD™ PLASTIC SMALL OUTLINE

THERMAL INFORMATION

This PowerPAD™ package incorporates an exposed thermal pad that is designed to be attached to a printed circuit board (PCB). The thermal pad must be soldered directly to the PCB. After soldering, the PCB can be used as a heatsink. In addition, through the use of thermal vias, the thermal pad can be attached directly to the appropriate copper plane shown in the electrical schematic for the device, or alternatively, can be attached to a special heatsink structure designed into the PCB. This design optimizes the heat transfer from the integrated circuit (IC).

For additional information on the PowerPAD package and how to take advantage of its heat dissipating abilities, refer to Technical Brief, PowerPAD Thermally Enhanced Package, Texas Instruments Literature No. SLMA002 and Application Brief, PowerPAD Made Easy, Texas Instruments Literature No. SLMA004. Both documents are available at www.ti.com.

The exposed thermal pad dimensions for this package are shown in the following illustration.



Exposed Thermal Pad Dimensions

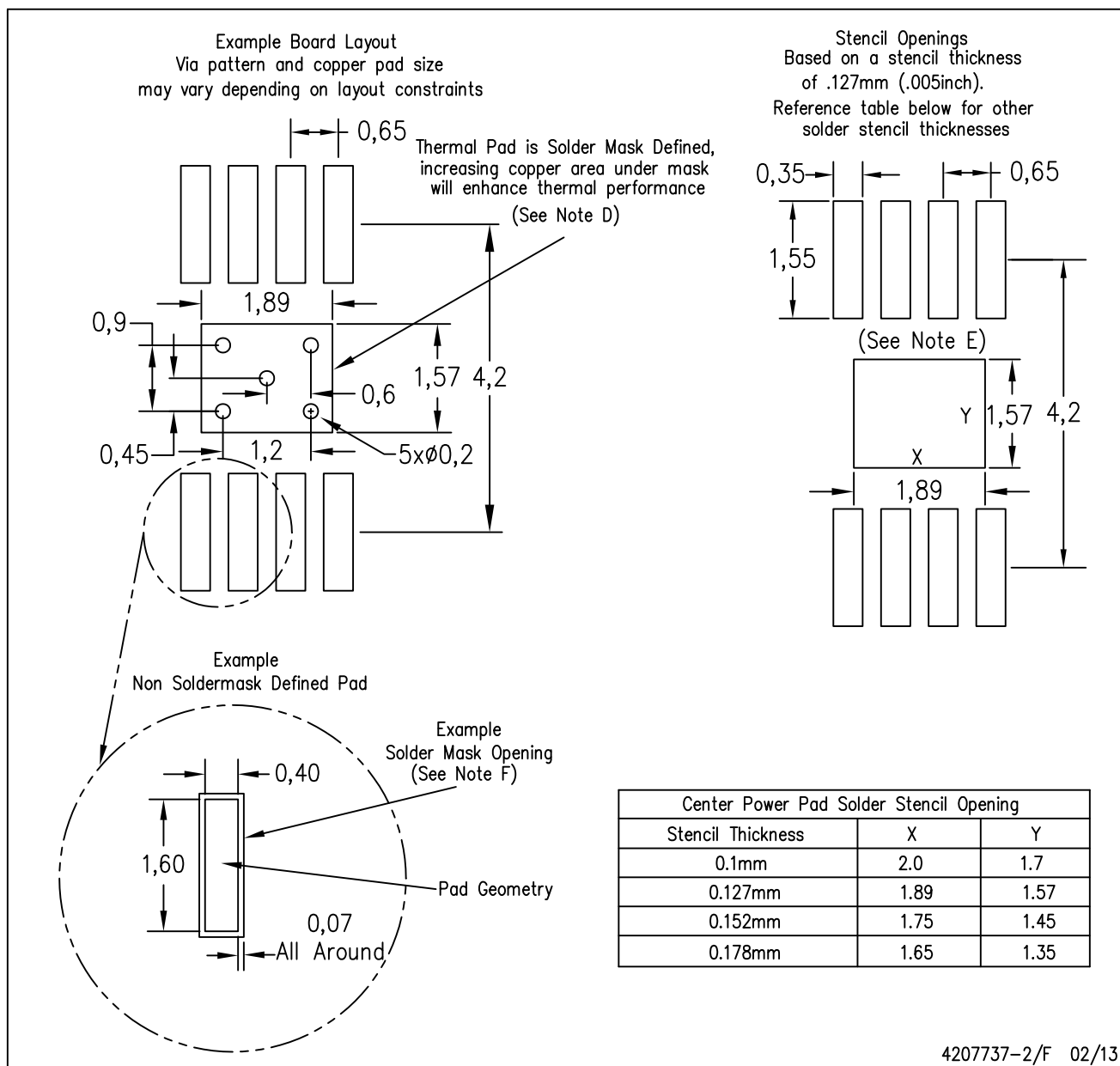
4206323-2/1 12/11

NOTE: All linear dimensions are in millimeters

PowerPAD is a trademark of Texas Instruments

DGN (R-PDSO-G8)

PowerPAD™ PLASTIC SMALL OUTLINE



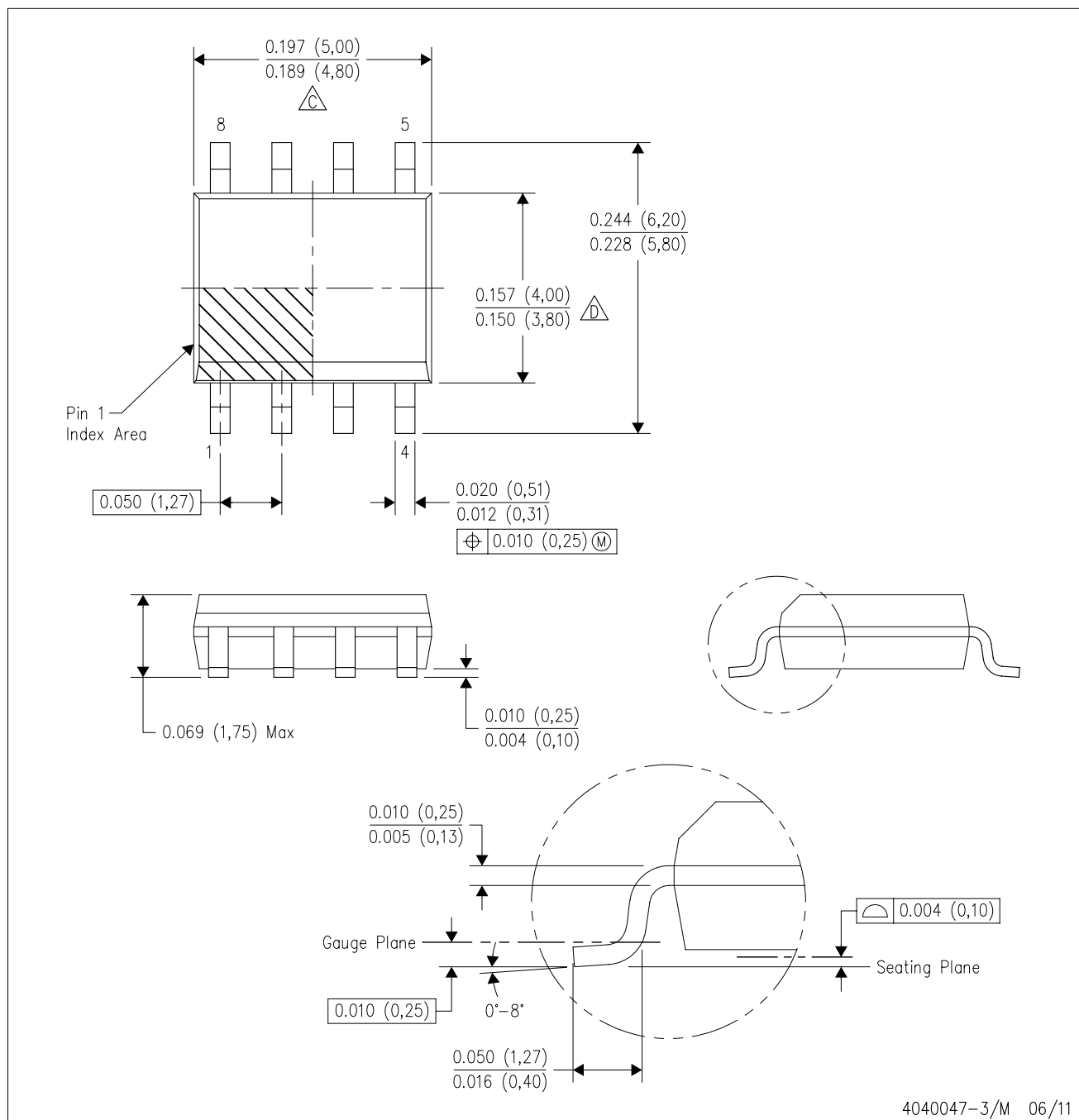
4207737-2/F 02/13

- NOTES:
- All linear dimensions are in millimeters.
 - This drawing is subject to change without notice.
 - Customers should place a note on the circuit board fabrication drawing not to alter the center solder mask defined pad.
 - This package is designed to be soldered to a thermal pad on the board. Refer to Technical Brief, PowerPad Thermally Enhanced Package, Texas Instruments Literature No. SLMA002, SLMA004, and also the Product Data Sheets for specific thermal information, via requirements, and recommended board layout. These documents are available at www.ti.com <<http://www.ti.com>>.
 - 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. Example stencil design based on a 50% volumetric metal load solder paste. Refer to IPC-7525 for other stencil recommendations.
 - Customers should contact their board fabrication site for solder mask tolerances between and around signal pads.

PowerPAD is a trademark of Texas Instruments

D (R-PDSO-G8)

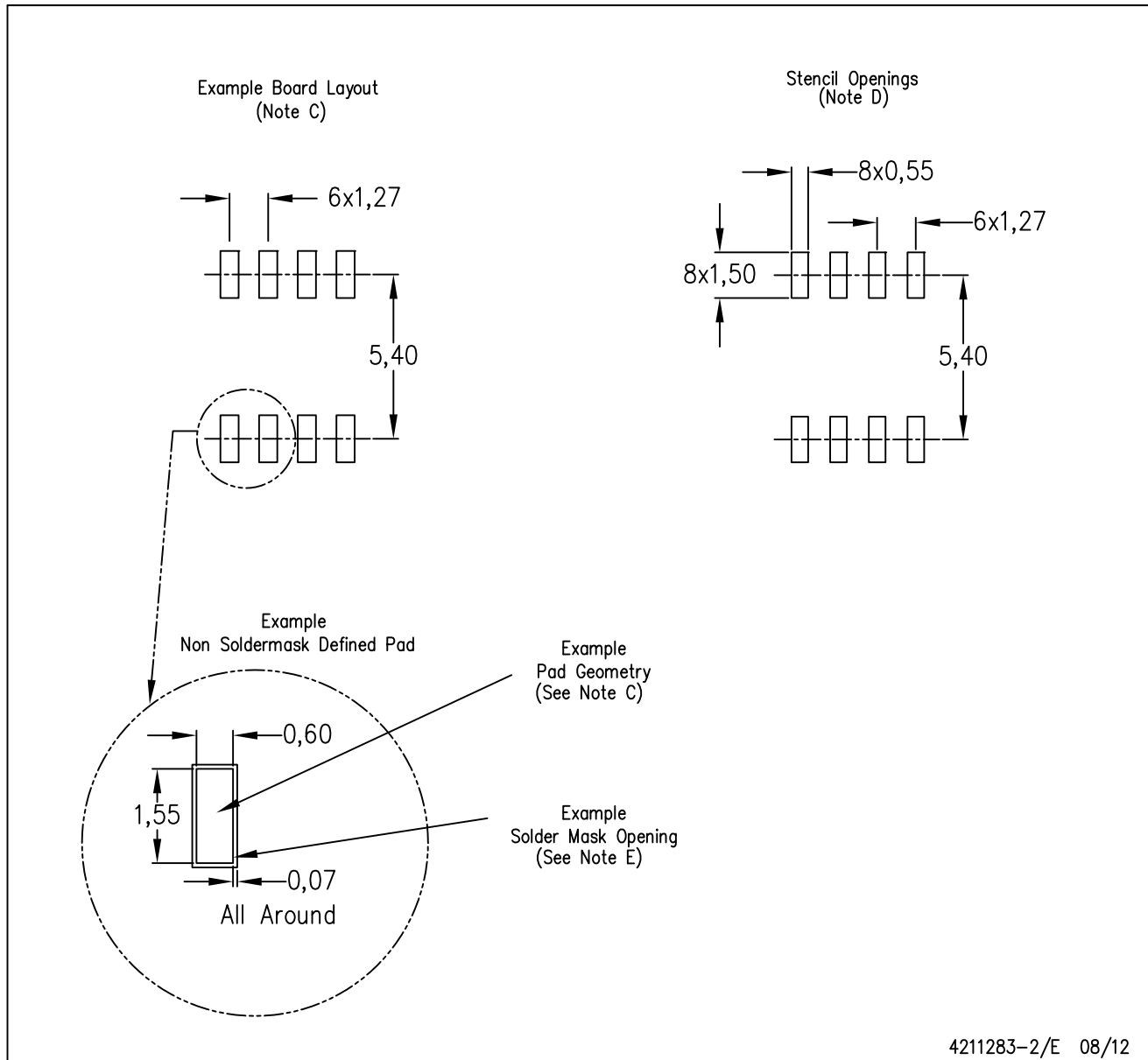
PLASTIC SMALL OUTLINE



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - $\triangle C$ Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.006 (0,15) each side.
 - $\triangle D$ Body width does not include interlead flash. Interlead flash shall not exceed 0.017 (0,43) each side.
 - E. Reference JEDEC MS-012 variation AA.

D (R-PDSO-G8)

PLASTIC SMALL OUTLINE



- NOTES:
- A. All linear dimensions are in millimeters.
 - B. This drawing is subject to change without notice.
 - C. Publication IPC-7351 is recommended for alternate designs.
 - 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 for other stencil recommendations.
 - 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, enhancements, improvements and other changes to its semiconductor products and services per JESD46, latest issue, and to discontinue any product or service per JESD48, latest issue. Buyers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All semiconductor products (also referred to herein as "components") are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

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

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

TI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI components or services are used. Information published by TI regarding third-party products or services does not constitute a license 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 significant portions 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. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

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

Buyer acknowledges and agrees that it is solely responsible for compliance with all legal, regulatory and safety-related requirements concerning its products, and any use of TI components in its applications, notwithstanding any applications-related information or support that may be provided by TI. Buyer represents and agrees that it has all the necessary expertise to create and implement safeguards which anticipate dangerous consequences of failures, monitor failures and their consequences, lessen the likelihood of failures that might cause harm and take appropriate remedial actions. Buyer will fully indemnify TI and its representatives against any damages arising out of the use of any TI components in safety-critical applications.

In some cases, TI components may be promoted specifically to facilitate safety-related applications. With such components, TI's goal is to help enable customers to design and create their own end-product solutions that meet applicable functional safety standards and requirements. Nonetheless, such components are subject to these terms.

No TI components are authorized for use in FDA Class III (or similar life-critical medical equipment) unless authorized officers of the parties have executed a special agreement specifically governing such use.

Only those TI components which TI has specifically designated as military grade or "enhanced plastic" are designed and intended for use in military/aerospace applications or environments. Buyer acknowledges and agrees that any military or aerospace use of TI components which have **not** been so designated is solely at the Buyer's risk, and that Buyer is solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI has specifically designated certain components as meeting ISO/TS16949 requirements, mainly for automotive use. In any case of use of non-designated products, TI will not be responsible for any failure to meet ISO/TS16949.

Products

Audio	www.ti.com/audio
Amplifiers	amplifier.ti.com
Data Converters	dataconverter.ti.com
DLP® Products	www.dlp.com
DSP	dsp.ti.com
Clocks and Timers	www.ti.com/clocks
Interface	interface.ti.com
Logic	logic.ti.com
Power Mgmt	power.ti.com
Microcontrollers	microcontroller.ti.com
RFID	www.ti-rfid.com
OMAP Applications Processors	www.ti.com/omap
Wireless Connectivity	www.ti.com/wirelessconnectivity

Applications

Automotive and Transportation	www.ti.com/automotive
Communications and Telecom	www.ti.com/communications
Computers and Peripherals	www.ti.com/computers
Consumer Electronics	www.ti.com/consumer-apps
Energy and Lighting	www.ti.com/energy
Industrial	www.ti.com/industrial
Medical	www.ti.com/medical
Security	www.ti.com/security
Space, Avionics and Defense	www.ti.com/space-avionics-defense
Video and Imaging	www.ti.com/video

TI E2E Community

e2e.ti.com