



### Ordering Information

PartNumber	Package	Packing	Temperature	Package Qty
TK4871MX	SOIC-8	Reel	-40°C ~ 85°C	2500
TK4871LD	WSO8-8	Reel	-40°C ~ 85°C	1000

### Pin Assignment

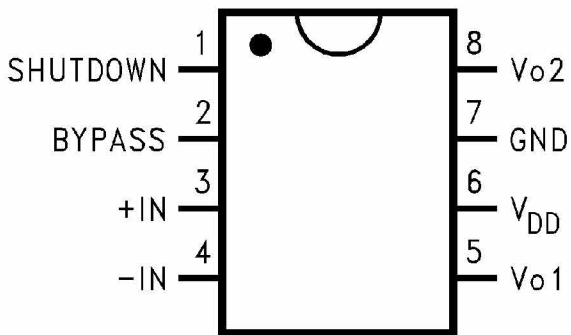


Figure 2. SOIC-8 Package

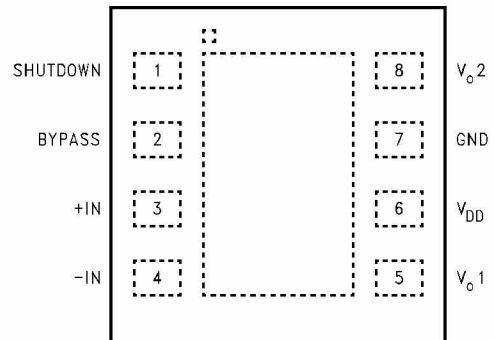


Figure 3. WSON-8 Package

### Pin Description

PIN	NAME	FUNCTION
TK4871		
1	SHUT DOWN	SHUTDOWN
2	BYPASS	BYPASS
3	+IN	Singal input +
4	-IN	ngal input -
5	Vo1	Vout port1
6	V <sub>DD</sub>	Supply Voltage
7	GND	Ground
8	Vo2	Vout port2

## ■ ABSOLUTE MAXIMUM RATINGS

Supply Voltage 6V	Continuous Power Dissipation (T <sub>A</sub> = +70°C)
Input Voltage -0.3V to (V <sub>DD</sub> + 0.3V)	8-Pin SOIC 7140°C/W
Driver Input Voltage (DI) -0.5V to (V <sub>CC</sub> + 0.5V)	ESD Susceptibility 5000V
Temperature Range -40°C ≤ T <sub>A</sub> ≤ 85°C	Supply Temperature -65°C to +150°C
Junction Temperature 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.

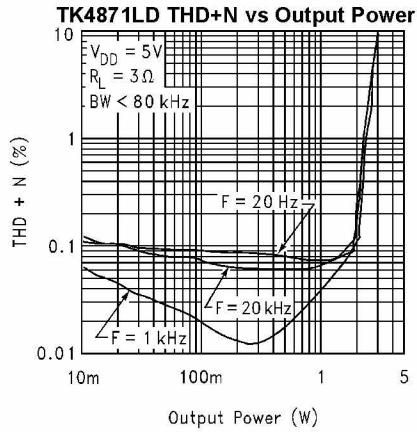
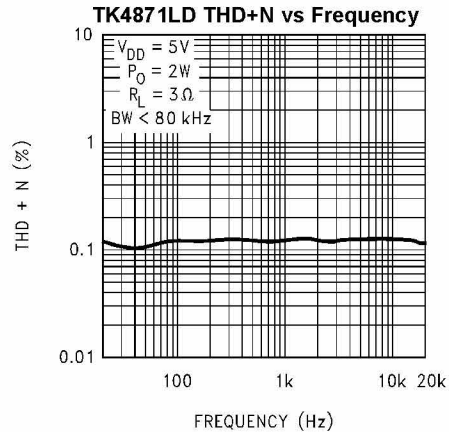
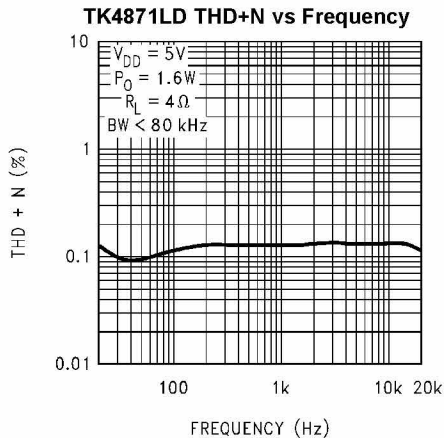
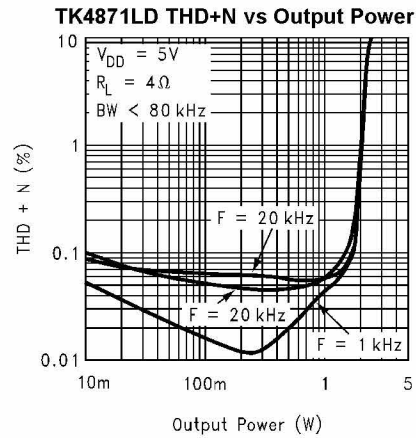
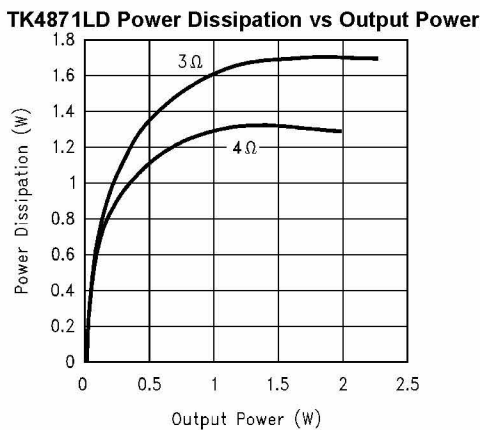
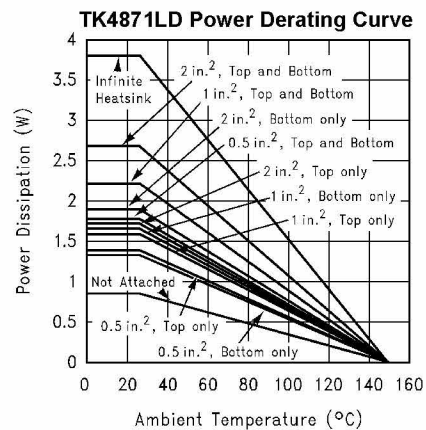
## ■ ELECTRICAL CHARACTERISTICS (1, 2)

(The following specifications apply for V<sub>DD</sub> = 5V and R<sub>L</sub> = 8Ω unless otherwise specified. Limits apply for T<sub>A</sub> = 25°C.)

Symbol	Parameter	Conditions	TK4871			Units (Limits)
			Min <sup>(3)</sup>	Typical <sup>(4)</sup>	Limit <sup>(3)</sup>	
V <sub>DD</sub>	Supply Voltage		2.0		5.5	V
I <sub>DD</sub>	Quiescent Power Supply Current	V <sub>IN</sub> = 0V, I <sub>o</sub> = 0A		6.5	10.0	mA
I <sub>SD</sub>	Shutdown Current	V <sub>PIN1</sub> = V <sub>DD</sub>		0.6	2	μA
V <sub>OS</sub>	Output Offset Voltage	V <sub>IN</sub> = 0V		5.0	50	mV
P <sub>o</sub>	Output Power	THD = 1%, f = 1kHz		2.38		W
		TK4871LD, R <sub>L</sub> = 3Ω <sup>(5)</sup> TK4871LD, R <sub>L</sub> = 4Ω <sup>(5)</sup> TK4871, R <sub>L</sub> = 8Ω <sup>(5)</sup>		2 1.2		
		THD+N = 10%, f = 1kHz		3		W
		TK4871LD, R <sub>L</sub> = 3Ω <sup>(5)</sup> TK4871LD, R <sub>L</sub> = 4Ω <sup>(5)</sup> TK4871, R <sub>L</sub> = 8Ω <sup>(5)</sup>		2.5 1.5		
THD+N	Total Harmonic Distortion+Noise	20Hz ≤ f ≤ 20kHz, A <sub>VD</sub> = 2 TK4871LD, R <sub>L</sub> = 4Ω, P <sub>O</sub> = 1.6W TK4871, R <sub>L</sub> = 8Ω, P <sub>O</sub> = 1W		0.13 0.25		%
PSRR	Power Supply Rejection Ratio	V <sub>DD</sub> = 4.9V to 5.1V		60		dB

- (1) Absolute Maximum Ratings indicate limits beyond which damage to the device may occur. Operating Ratings indicate conditions for which the device is functional, but do not ensure specific performance limits. Electrical Characteristics state DC and AC electrical specifications under particular test conditions which ensure specific performance limits. This assumes that the device is within the Operating Ratings. Specifications are not ensured for parameters where no limit is given, however, the typical value is a good indication of device performance.
- (2) All voltages are measured with respect to the ground pin, unless otherwise specified.
- (3) Typicals are specified at 25°C and represent the parametric norm.
- (4) Limits are specified to TI's AOQL (Average Outgoing Quality Level).
- (5) When driving 3Ω or 4Ω loads from a 5V supply,

### Typical Performance Characteristics NGN Specific Characteristics


**Figure 4.**

**Figure 5.**

**Figure 6.**

**Figure 7.**

**Figure 8.**

**Figure 9.**

This curve shows the TK4871LD's thermal dissipation ability at different ambient temperatures given the exposed-DAP of the part is soldered to a plane of 1oz. Cu with an area given in the label of each curve. This label also designates whether the plane exists on the same (top) layer as the chip, on the bottom layer, or on both layers. Infinite heatsink and unattached (no heatsink) conditions are also shown.

### Typical Performance Characteristics Non-NGN Specific Characteristics

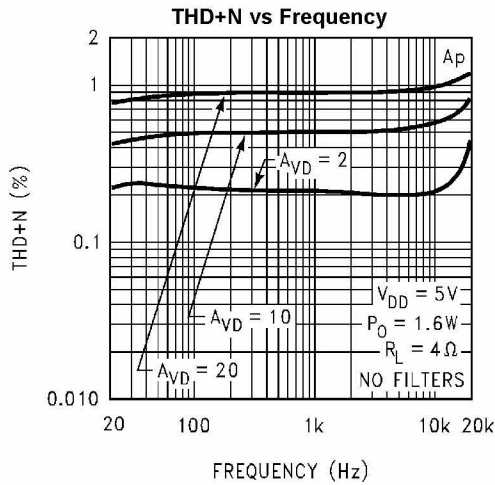


Figure 10.

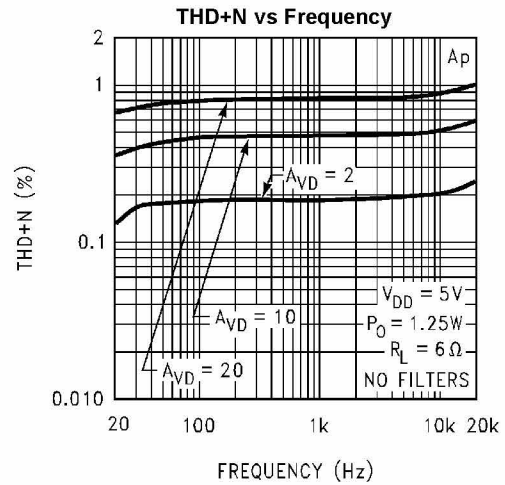


Figure 11.

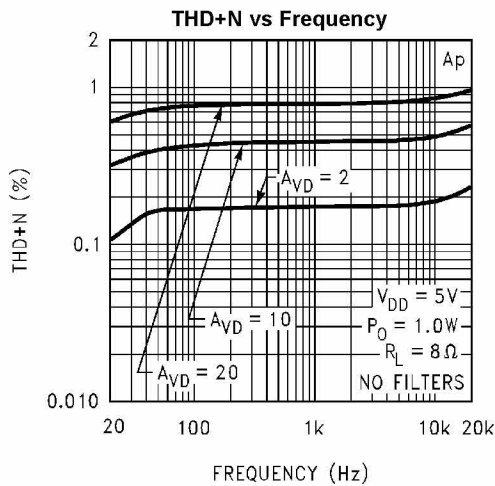


Figure 12.

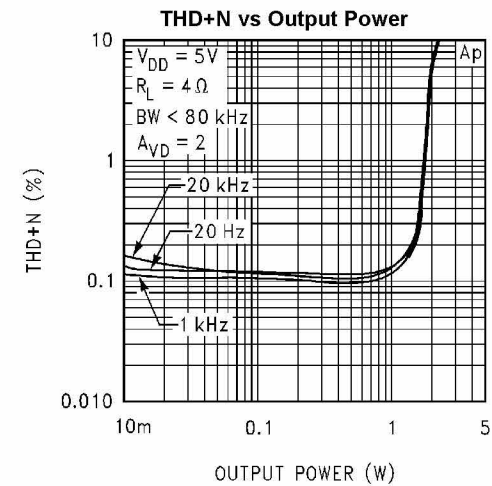


Figure 13.

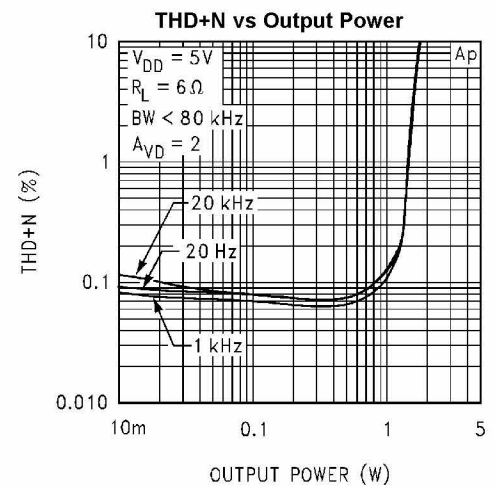


Figure 14.

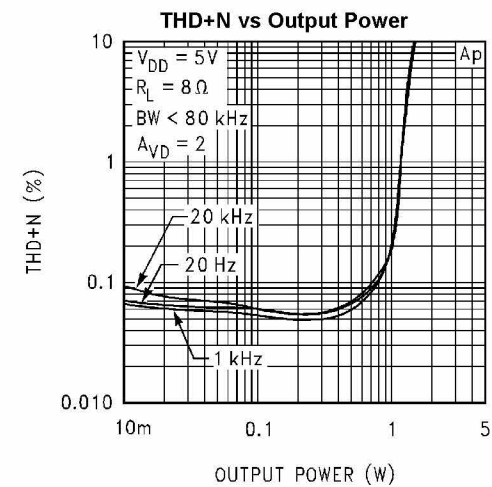


Figure 15.



**Typical Performance Characteristics**  
**Non-NGN Specific Characteristics (continued)**

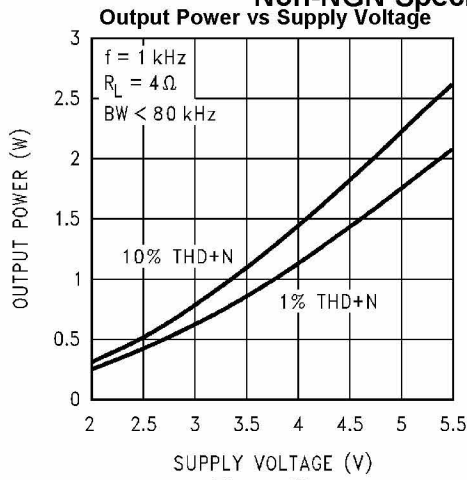


Figure 16.

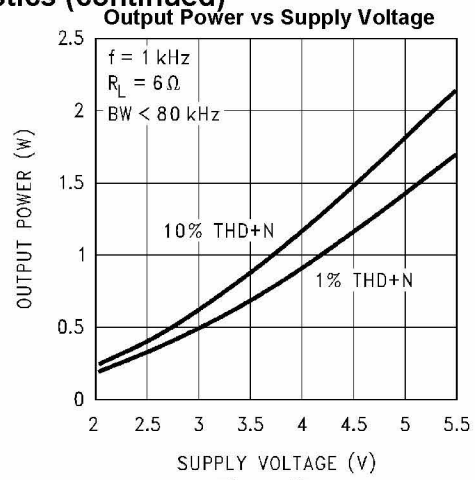


Figure 17.

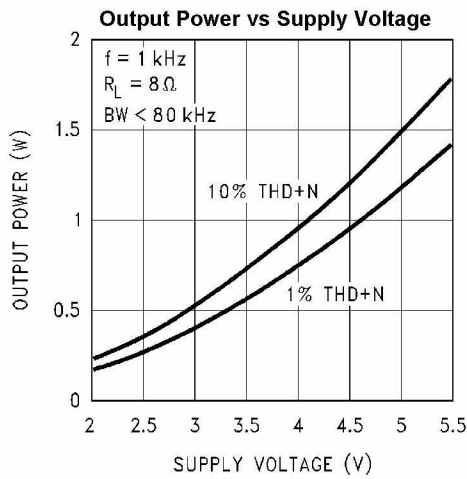


Figure 18.

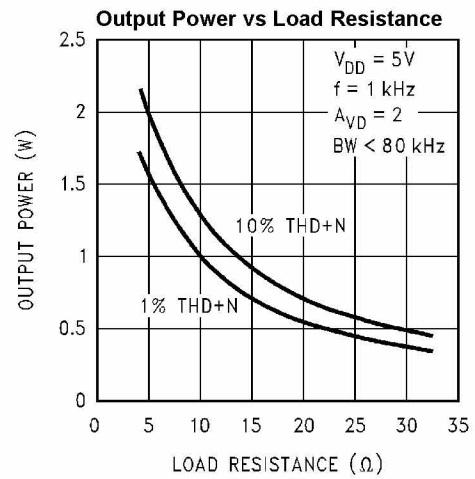


Figure 19.

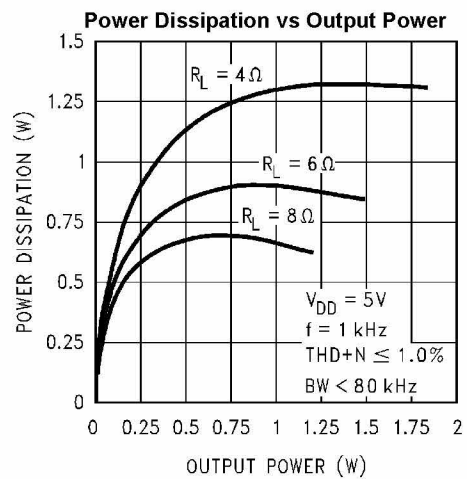


Figure 20.

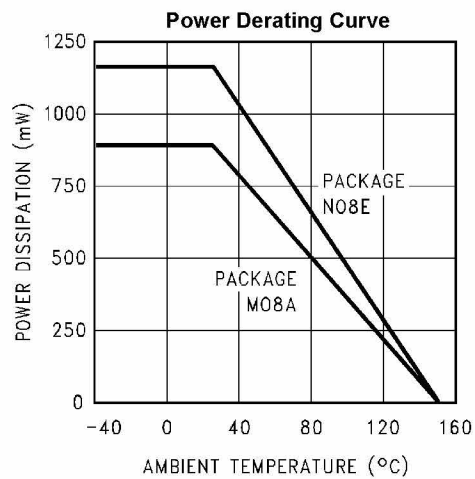
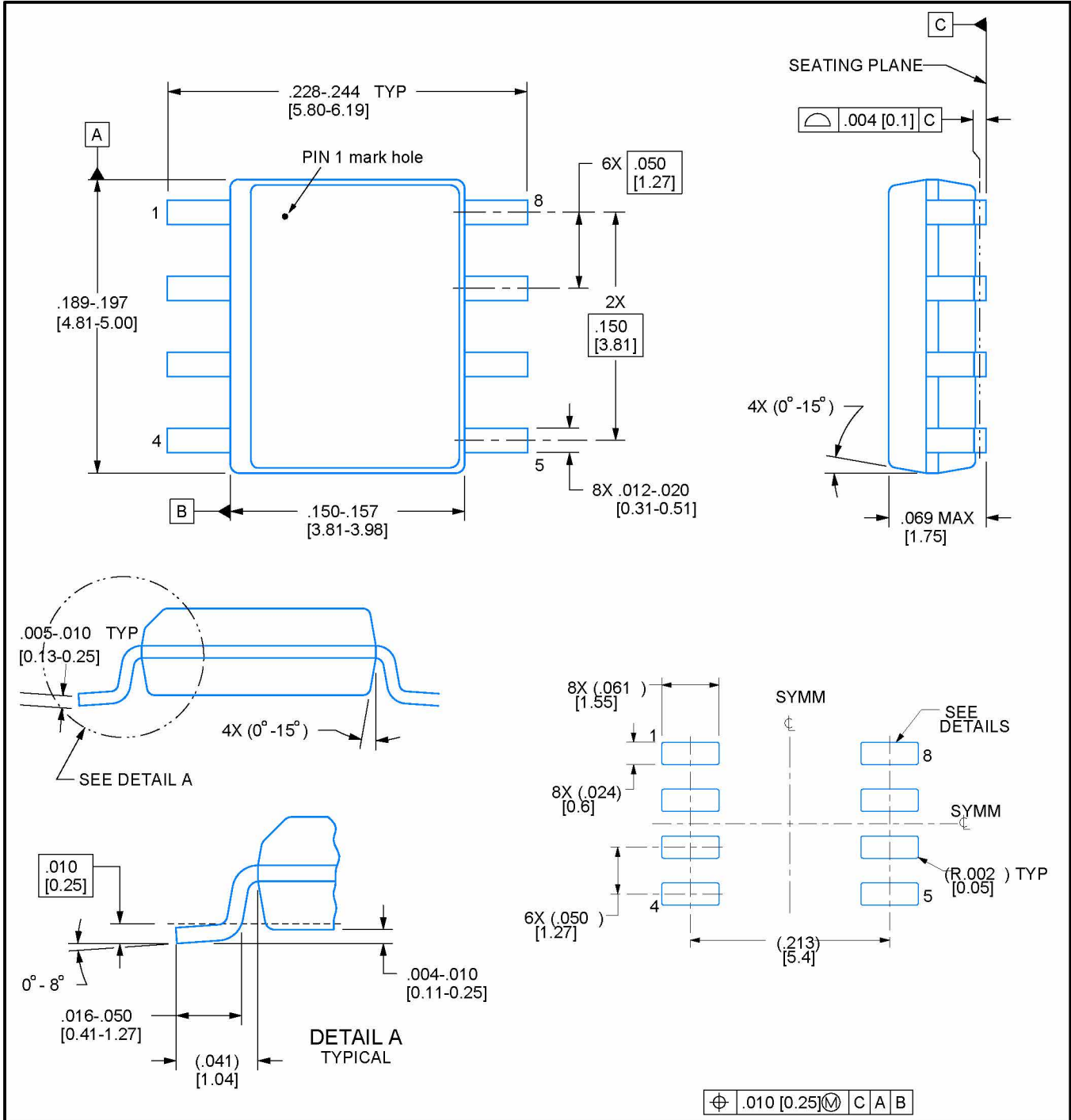
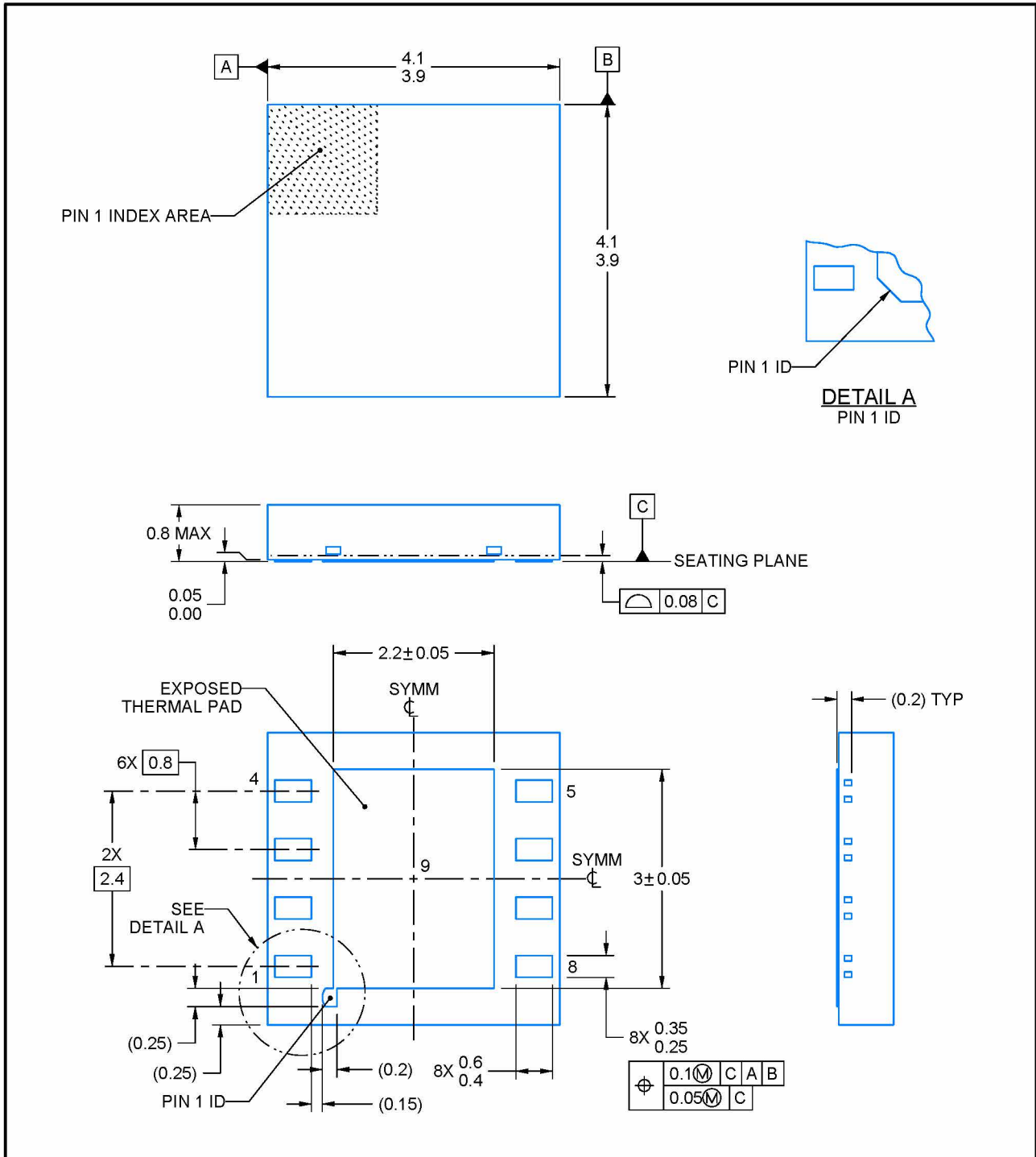


Figure 21.

**PACKAGE OUTLINE SOIC - 8, 1.75 mm max height**



NOTES: Linear dimensions are in inches [millimeters]. This dimension does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed  $.006$  [0.15] per side.

**PACKAGE OUTLINE WSON - 0.8 mm max height**

**NOTES:**

1. All linear dimensions are in millimeters. Any dimensions in parenthesis are for reference only. Dimensioning and tolerancing per ASME Y14.5M.
2. This drawing is subject to change without notice.
3. The package thermal pad must be soldered to the printed circuit board for thermal and mechanical performance.