

2 X 2 Crosspoint Switch for Audio Applications

Check for Samples: TS3A26746E

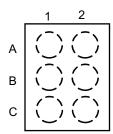
FEATURES

- Ultra Low R_{ON} for GND Switch (80-mΩ typical)
- R_{ON} for MIC Switch <10-Ω
- 3.0V to 3.6V V+ Operation
- Control Input is 1.8-V Logic Compatible
- 6-bump, 0.5mm pitch CSP Package (1.45mm × 0.95mm × 0.5mm)
- Latch-Up Performance Exceeds 100 mA Per JESD 78, Class II
- ESD Performance Tested Per JESD 22
 - 2000-V Human-Body Model (A114-B, Class II)
 - 500-V Charged-Device Model (C101)
- ESD Performance (SLEEVE, RING2)
 - ±8-kV Contact Discharge (IEC 61000-4-2)

APPLICATIONS

- · Cellular phones
- PDAs
- Portable Instrumentation
- · Digital Still Cameras
- Portable Navigation Devices

PINOUT



DESCRIPTION

The TS3A26746E is a 2 × 2 cross-point switch that is used to interchange the Ground and MIC connections on a headphone connector. The Ground switch has an ultra low R_{ON} of <0.1 Ω to minimize voltage drop across it, preventing undesired increases in headphone ground reference voltage. The switch state is controlled via the SEL input. When SEL=High, GND is connected to RING2 and MIC is connected to SLEEVE. When SEL=Low, GND is connected to SLEEVE and MIC is connected to RING2. An internal 100k pull-up resistor on the SEL input sets the default state of the switch.

ORDERING INFORMATION

T _A PAC		AGE ⁽¹⁾	ORDERABLE PART NUMBER	TOP-SIDE MARKING		
–40°C to 85°C	YZP - WCSP	Tape and Reel	TS3A26746EYZPR	7N		

 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.





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.

TYPICAL APPLICATION BLOCK DIAGRAM

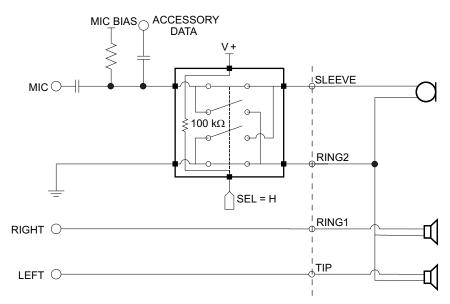


Figure 1. Standard Headphone Configuration (SEL=H)

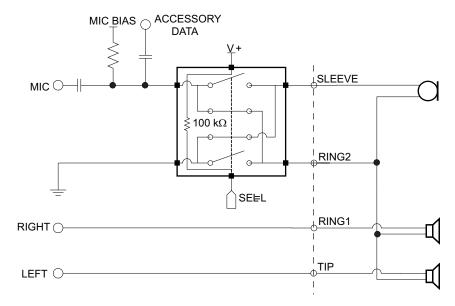


Figure 2. Alternate Headphone Configuration (SEL=L)

To request a full data sheet, please send an email to: <u>signal-switches@list.ti.com</u>



PACKAGE OPTION ADDENDUM

8-Nov-2011

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)
TS3A26746EYZPR	ACTIVE	DSBGA	YZP	6	3000	Green (RoHS & no Sb/Br)	SNAGCU	Level-1-260C-UNLIM	

(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.

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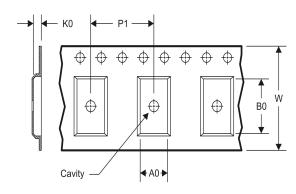
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TAPE AND REEL INFORMATION

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
TS3A26746EYZPR	DSBGA	YZP	6	3000	180.0	8.4	1.02	1.52	0.63	4.0	8.0	Q1

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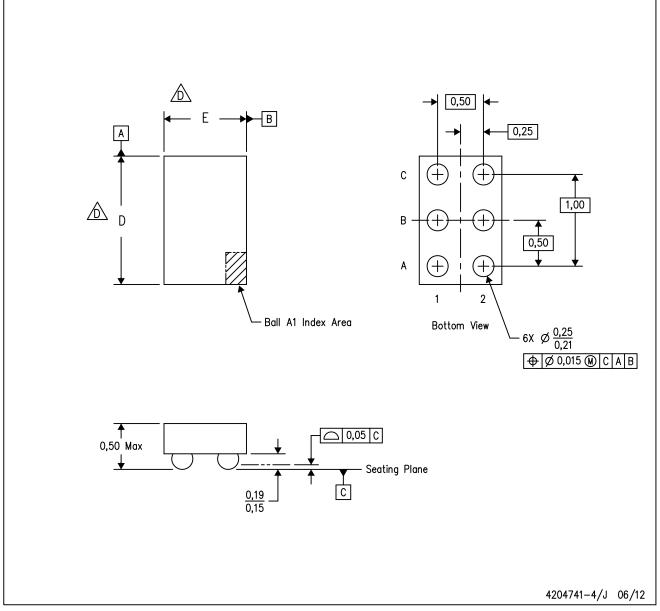


*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
TS3A26746EYZPR	DSBGA	YZP	6	3000	210.0	185.0	35.0

YZP (R-XBGA-N6)

DIE-SIZE BALL GRID ARRAY



- NOTES: A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - C. NanoFree™ package configuration.
 - The package size (Dimension D and E) of a particular device is specified in the device Product Data Sheet version of this drawing, in case it cannot be found in the product data sheet please contact a local TI representative.
 - E. This package is a Pb-free solder ball design. Refer to the 6 YEP package (drawing 4204725) for tin-lead (SnPb).

NanoFree is a trademark of Texas Instruments.



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