

Application Brief

AFE77xxD BSDL Guidelines



Guidelines

- RESETZ: Pulsed from VSS to IOVDD for > 100ns upon power up.
 - If RESETZ is tied to IOVDD upon power-up, the device comes up in an unknown state and the direction of IO pads is unknown.
 - To bring up the device to a known state, RESETZ needs to be pulsed from VSS to IOVDD.
- The two pins BIST1 and BIST0 determine the mode of operation. For BSR mode:
 - BISTB1: To be tied HIGH.
 - BISTB0: To be tied LOW.
- Some of the IOs are not brought out but have BSR cells.
 - These are mentioned as linkage and associated with some of the power pads like VDDA.
 - Nothing needs to be done for these pins.
- IR width is 8 bits for all instructions.
- The instruction opcodes are as follows:
 - SAMPLE : 0x02
 - EXTEST : 0x00
 - BYPASS : 0xFF
 - IDCODE : 0x01
- 32-bit DR value for IDCODE of the device is as follows:
 - MANUFACTURER NUMBER: 11 bits: 0x451
 - PART_NUMBER: 16 bits: 0x0078
 - VERSION_NUMBER: 4 bits: 0x0
 - IDCODE: 32 bits: 0x000788A3
- [Table 1](#) summarizes the modes of operation of the device using BIST inputs

Table 1. Device Modes of Operation

BIST1	BIST0	Mode	BSCAN
0V	0V	Functional	No
0V	1.8V	Functional	No
1.8V	0V	BSCAN	Yes
1.8V	1.8V	INVALID	No

Trademarks

All trademarks are the property of their respective owners.

IMPORTANT NOTICE AND DISCLAIMER

TI PROVIDES TECHNICAL AND RELIABILITY DATA (INCLUDING DATA SHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES "AS IS" AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for skilled developers designing with TI products. You are solely responsible for (1) selecting the appropriate TI products for your application, (2) designing, validating and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, regulatory or other requirements.

These resources are subject to change without notice. TI grants you permission to use these resources only for development of an application that uses the TI products described in the resource. Other reproduction and display of these resources is prohibited. No license is granted to any other TI intellectual property right or to any third party intellectual property right. TI disclaims responsibility for, and you will fully indemnify TI and its representatives against, any claims, damages, costs, losses, and liabilities arising out of your use of these resources.

TI's products are provided subject to [TI's Terms of Sale](#) or other applicable terms available either on [ti.com](https://www.ti.com) or provided in conjunction with such TI products. TI's provision of these resources does not expand or otherwise alter TI's applicable warranties or warranty disclaimers for TI products.

TI objects to and rejects any additional or different terms you may have proposed.

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2024, Texas Instruments Incorporated