

MXT449T-AT/MXT449T-AB 1.0

Enhanced Algorithms

- Lens bending algorithms to remove display noise
- Touch suppression algorithms to remove unintentional large touches, such as palm
- Palm Recovery Algorithm for quick restoration to normal state

Product Data Store Area

- Up to 60 bytes of user-defined data can be stored during production

Power Saving

- Programmable timeout for automatic transition from active to idle states
- Pipelined analog sensing detection and digital processing to optimize system power efficiency

Application Interfaces

- I²C-compatible slave with support for Standard mode (up to 100 kHz), Fast mode (up to 400 kHz), Fast-mode Plus (up to 1 MHz), High-speed mode (up to 3.4 MHz)
- SPI slave interface (up to 8 MHz)
- Interrupt to indicate when a message is available
- SPI Debug Interface to read the real-time raw data for tuning and debugging purposes

Power Supply

- Digital (Vdd) 3.3 V nominal
- Digital I/O (VddIO) 3.3 V nominal
- Analog (AVdd) 3.3 V nominal
- High voltage internal X line drive (XVdd) 6.6 V with internal voltage pump (XVdd = Vdd if voltage pump not used)

Package

- 100-pin TQFP 14 × 14 × 1 mm, 0.5 mm pitch

Operating Temperature

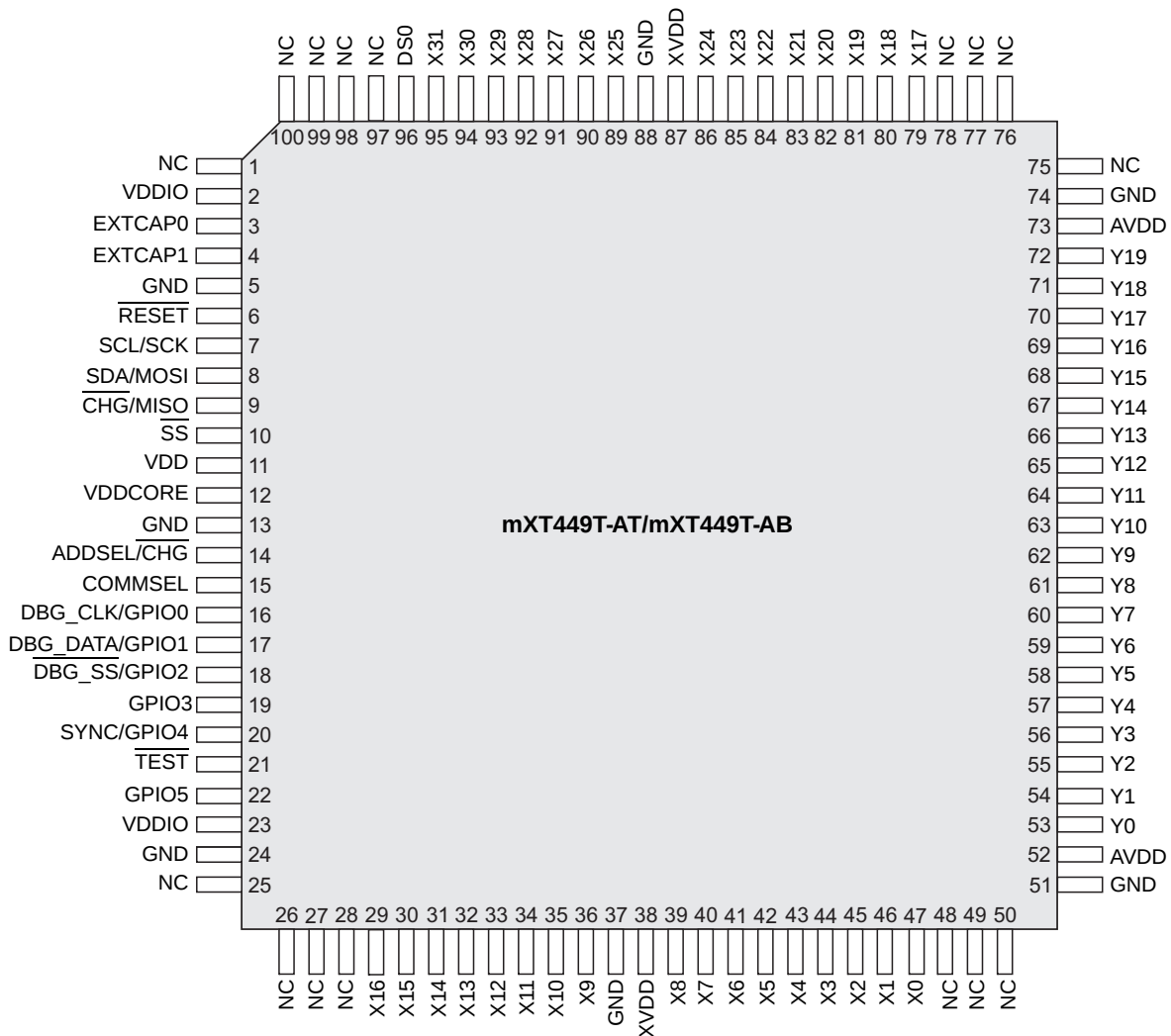
- mXT449T-AT: –40°C to +85°C (Grade 3)
- mXT449T-AB: –40°C to +105°C (Grade 2)

Design Services

- Review of device configuration, stack-up and sensor patterns
- Custom firmware versions can be considered
- Contact your Microchip representative for more information

PIN CONFIGURATION

100-pin TQFP



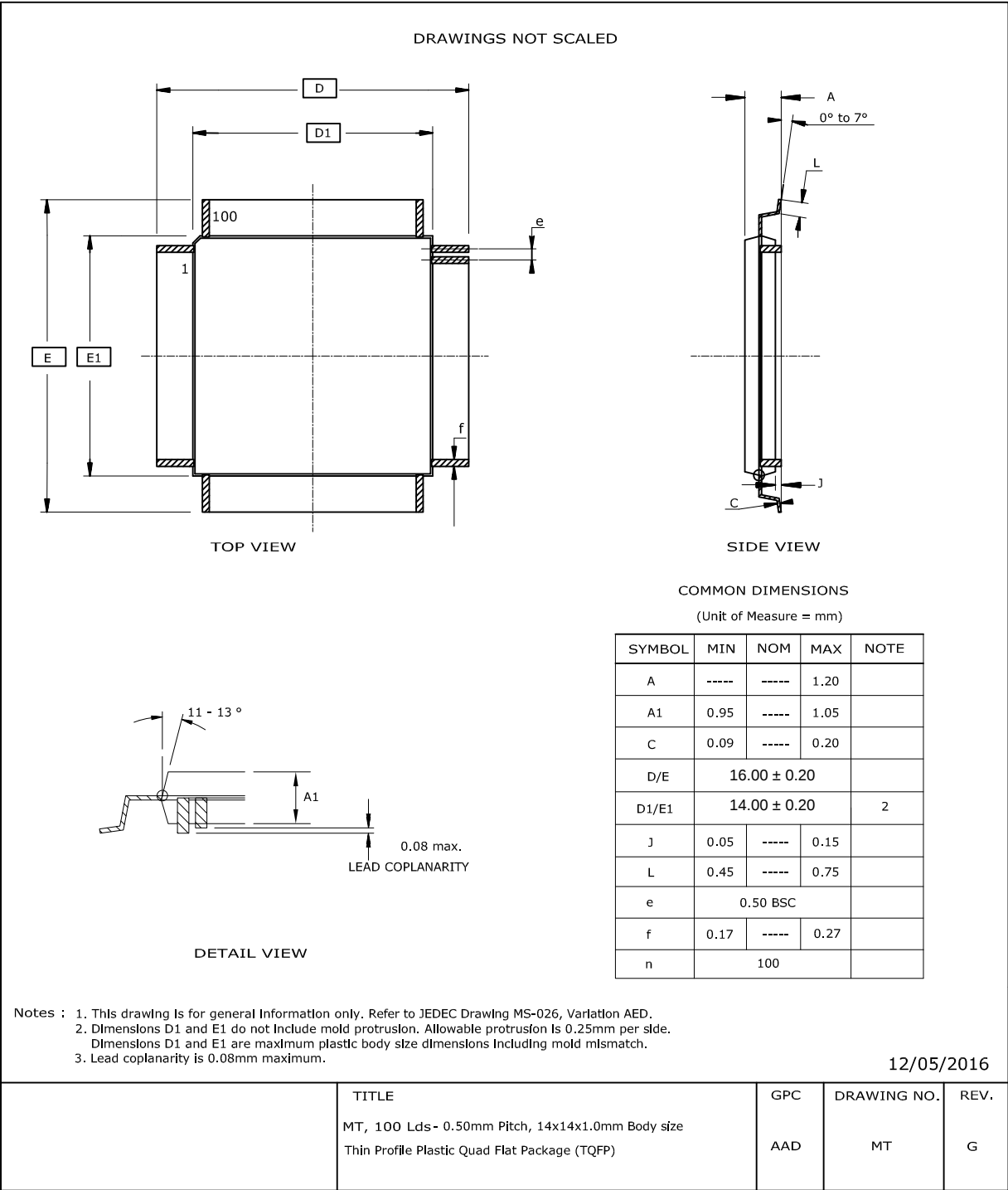
Top view

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1.0 PACKAGING INFORMATION

The following section gives the technical details of the package for the device.

1.1 100-pin TQFP 14 × 14 × 1 mm



APPENDIX A: REVISION HISTORY

Revision A (January 2018)

Initial edition for firmware revision 1.0 – Release

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PRODUCT IDENTIFICATION SYSTEM

The table below gives details on the product identification system for maXTouch devices. See [“Orderable Part Numbers”](#) below for example part numbers for the MXT449T-AT/mXT449T-AB.

To order or obtain information, for example on pricing or delivery, refer to the factory or the listed sales office.

PART NO.	-XXX	[X]	[XX]	[X]	[XXX]
Device	Package	Temperature Range	Sample Type	Tape and Reel Option	Pattern
Device:	Base device name				
Package:	A	=	QFP (Plastic Quad Flatpack)		
	CCU	=	UFBGA (Ultra Thin Fine-pitch Ball Grid Array)		
	C2U	=	UFBGA (Ultra Thin Fine-pitch Ball Grid Array)		
	NHU	=	UFBGA (Ultra Thin Fine-pitch Ball Grid Array)		
	C4U	=	X1FBGA (Extra Thin Fine-pitch Ball Grid Array)		
	MAU	=	XQFN (Super Thin Quad Flat No Lead Sawn)		
	MA5U	=	XQFN (Super Thin Quad Flat No Lead Sawn)		
	UU	=	WLCSP (Wafer Level Chip Scale Package)		
Temperature Range:	Blank	=	-40°C to +85°C (Grade 3)		
	T	=	-40°C to +85°C (Grade 3)		
	B	=	-40°C to +105°C (Grade 2)		
Sample Type:	Blank	=	Release Sample		
	ES	=	Pre-release (Engineering) Sample		
Tape and Reel Option:	Blank	=	Standard Packaging (Tube or Tray)		
	R	=	Tape and Reel ⁽¹⁾		
Pattern:	QTP, SQTP, Code or Special Requirements (Blank Otherwise)				

Note 1: Tape and Reel identifier only appears in the catalog part number description. This identifier is used for ordering purposes and is not printed on the device package. See “[Orderable Part Numbers](#)” below or check with your Microchip Sales Office for package availability with the Tape and Reel option.

Orderable Part Numbers

Orderable Part Number	Firmware Revision	Description
ATMXT449T-AT (Supplied in trays)	1.0.AA	100-pin TQFP 14 × 14 × 1 mm, RoHS compliant Operating temperature range -40°C to +85°C (Grade 3)
ATMXT449T-ATR (Supplied in tape and reel)		
ATMXT449T-AB (Supplied in trays)	1.0.AA	100-pin TQFP 14 × 14 × 1 mm, RoHS compliant Operating temperature range -40°C to +105°C (Grade 2)
ATMXT449T-ABR (Supplied in tape and reel)		

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