

**CT10977 Chip-On-Flex Specification**  
**PCAP Microchip® mxT640T I<sup>2</sup>C**

**Sustaining Quality,  
Exceeding Expectations**

**DawarTouch®**

## 1. General Description

The CT10977 is a chip-on-flex (COF) circuit programmed to work with 10.1in Dawar sensor DW03081. The unprogrammed COF circuit is CT10455. The COF circuit uses the Microchip® mxT640T maXTouch® controller. The communications interface is standard I<sup>2</sup>C @ 400kHz.

For more information on the mxT640T controller refer to the following Microchip® documentation:

- ▶ mxT640T Datasheet
- ▶ Interfacing with maXTouch Touchscreen Controllers

Both documents are available on [Microchip's website](#).

## 2. Functional Description

The CT10977 controller supports the following features:

- ▶ Up to 16 finger touches
- ▶ Stylus touches (stylus diameter depends on sensor design)
- ▶ Glove touches
- ▶ Thick cover lenses (up to 4mm glass, 2mm plastic)
- ▶ Greater than 100Hz report rate
- ▶ Low latency (<10ms for first touch report from idle mode)
- ▶ Automatic self-calibration
- ▶ Aggressive noise avoidance and noise cancellation features
- ▶ Maximum resolution of 4095 x 4095

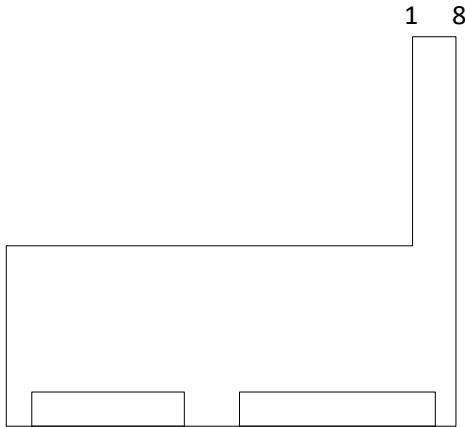
Additional tuning support from Dawar is available for specialized applications.

## 3. Electrical Specifications

Parameter	Min	Typ	Max	Units	Remarks
Digital Power Supply (VDD)	3.0	3.3	3.4	V	
Active Current	-	18	-	mA	Note 1
Sleep Current	-	186	-	µA	
X Electrodes	-	-	30	-	
Y Electrodes	-	-	20	-	

*Note 1: Active power depends on configuration settings and number of touches.*

## 4. Connector



Pin	Description	Note
1	3.3V	
2	GND	
3	SCL	I2C clock with 3.3k pull-up to 3.3 V
4	SDA	I2C data with 3.3k pull-up to 3.3 V
5	/CHG	Active low interrupt indicating data is available with 3.3k pull-up to 3.3 V
6	/RESET	Active low reset with 10k pull-up to 3.3V
7	GPIO2	GPIO – contact Dawar for information
8	GPIO1	GPIO – contact Dawar for information

Mating connector is Molex 503480-0800.

I<sup>2</sup>C address is 0x4B.

## 5. Environmental Specifications

Parameter	Min	Typ	Max	Units	Remarks
Operating Temperature	-40	-	85	°C	
Storage Temperature	-40	-	90	°C	
Relative Humidity	0	-	95	%RH	Note 1

Note 1: RH is defined at 60°C, non-condensing.

## 6. Operating System Support

Operating System	Supported	Remarks
Microsoft Windows XP	No	
Microsoft Windows 7	No	
Microsoft Windows 8	No	Note 1
Microsoft Windows 10	No	Note 1
Linux	Yes	Note 2

Note 1: Windows HID over I<sup>2</sup>C is supported on custom designs.

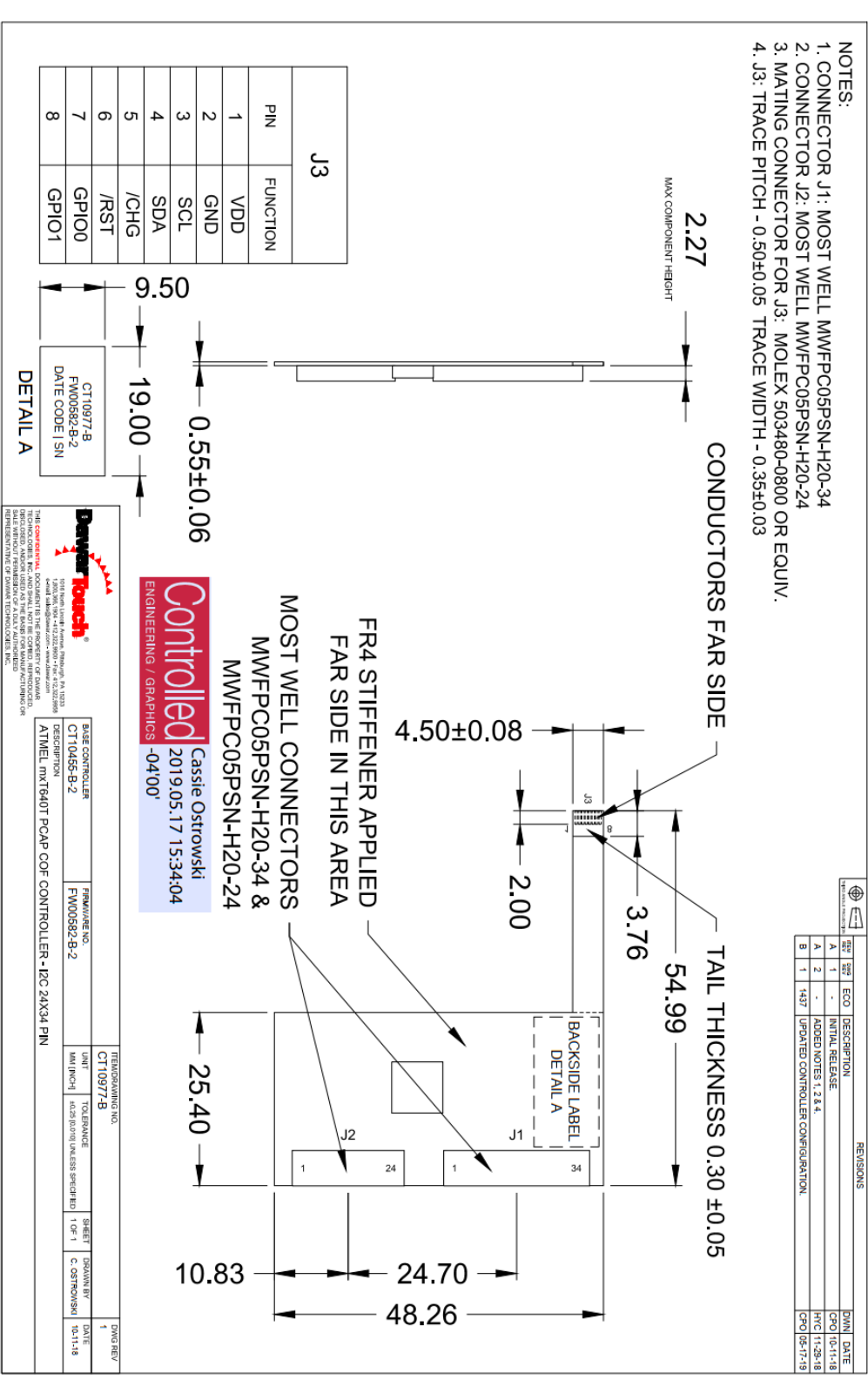
Note 2: For information on Linux drivers refer to <https://github.com/atmel-maxtouch/linux/wiki>.

## 7. Product Life

Dawar Technologies is committed to providing products stability and support to our valued customers throughout the life of the product. All Dawar Touch products meet the following minimum requirements:

- ▶ 5 year minimum product lifecycle
- ▶ 12 month end of life (EOL) notification
- ▶ Last time buy option with EOL notification
- ▶ 60 day change notification for any change that affects form, fit, or function

- NOTES:
- CONNECTOR J1: MOST WELL MWFP05PSN-H20-34
  - CONNECTOR J2: MOST WELL MWFP05PSN-H20-24
  - MATING CONNECTOR FOR J3: MOLEX 503480-0800 OR EQUIV.
  - J3: TRACE PITCH - 0.50±0.05 TRACE WIDTH - 0.35±0.03



PIN	FUNCTION
1	VDD
2	GND
3	SCL
4	SDA
5	/CHG
6	/RST
7	GPIO0
8	GPIO1

**Controlled**  
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**Revision History**

<b>Revision</b>	<b>Date</b>	<b>Content</b>	<b>Author</b>
A	9-6-2019	Initial Release	Tony Gray
B	1-29-2020	Updated drawing	Tony Gray