PenMount® PenMount M1 Controller IC Data Sheet

Features:

PenMount Multi-Finger touch screen controller is new member of PenMount Family that is able to support the multi-fingers touch function from one to twelve zones touch area with the touch screen with multi-fingers touch features designed product. PenMount Multi-Finger touch screen controller solution included M1 of controller chip and PM6250 of control board, hardware and firmware is designed to take up to 12 touch points at the same time, the input way could be by finger and/or stylus, and every touch zone is able to be activated simultaneously. The interface is available as the exiting PenMount controller, to support USB and RS-232 interface.

Specifications:

Support:	Able to support Multi-Finger Resistive touch screen with 1~12 zones
Interface:	USB Model : USB Full Speed
	RS232 Model : 19200 baud rate, None parity, 8 data bits, 1 stop bit, non-PnP mode
Resolution:	1024 x 1024
Cursor Accuracy:	< 1% (Active Area Diagonal of touch screen. After calibrated with PenMount Advanced Calibration)
Sample Rate:	167 points/sec (1 finger touch)
	125 points/sec (2 fingers per finger)
	The average is about 100~40 points/sec.(3~12 fingers)
Resistance Range:	50 ~ 1.5 K ohm for each zone
Touch Response Time:	30ms
Power Requirements	Voltage: +5V DC ± 5% (50mV peak to peak max ripple) (Current: maximal 100mA, typical 70mA)
Storage Temperature	-40 ℃ to +85 ℃
Operating Temperature	-20 ℃ to +70 ℃

Driver and Software:

- Supports Microsoft Windows XP / Vista / 7
- Provides single touch gesture recognition on Microsoft Windows systems
- Software library is available by request for developing applications based on Microsoft Windows 2000 and later operating systems.

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- Available Software utilities :
  - Advanced calibration
  - Right mouse button simulation
  - Multi-monitor setting
  - Screen rotation detection
  - Draw program

Packaging Information

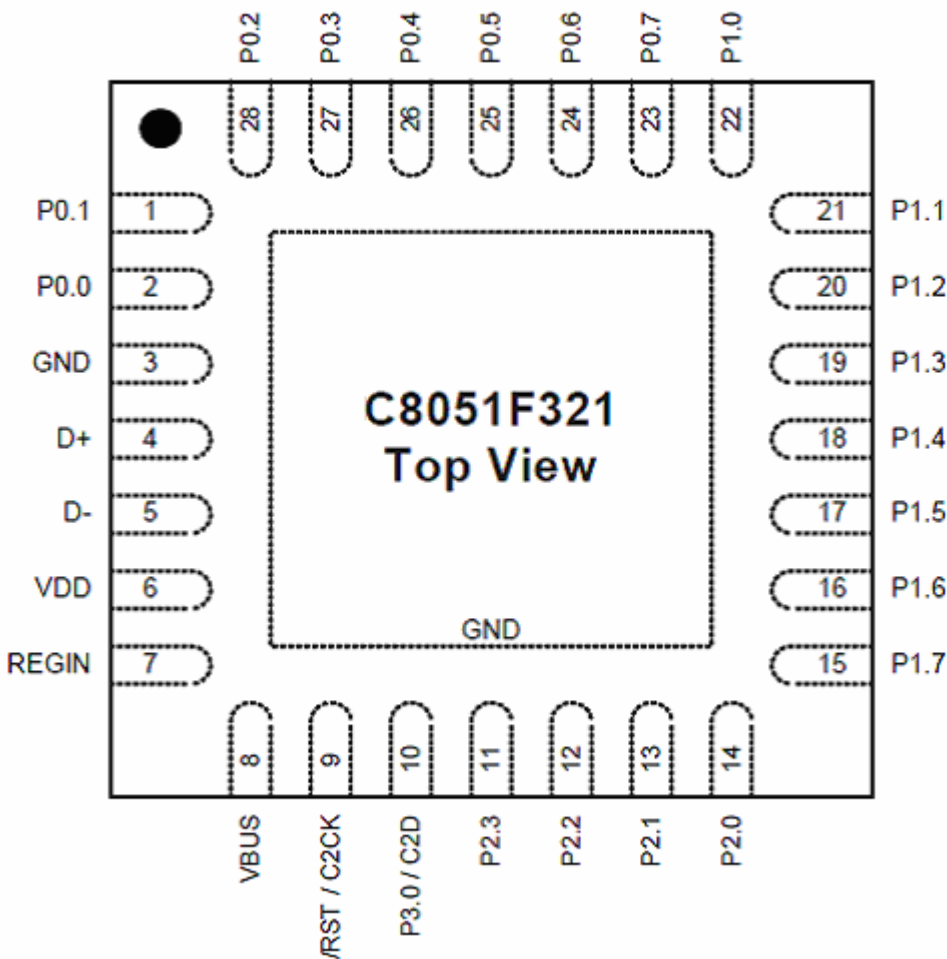The following diagram depicts the pinout of chip:
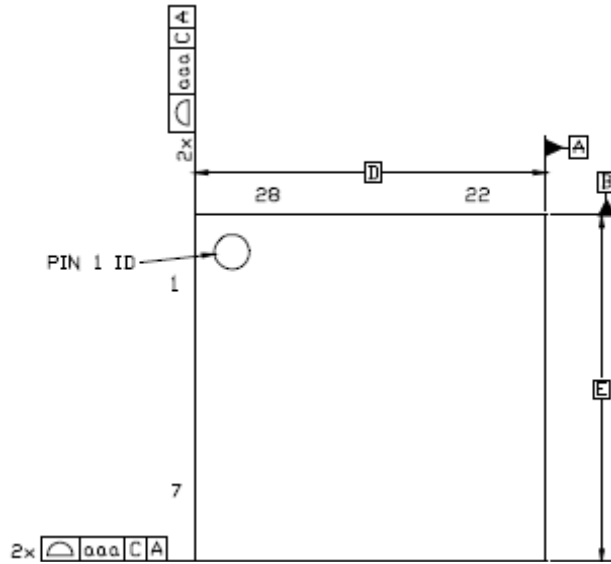

Fig. 1: QFN-28 Pinout Diagram (Top View)

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Fig. 2: QFN–28 Package Drawings - Top View

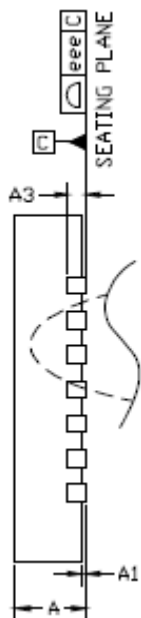Fig. 3: QFN–28

Package Drawings –

Side View
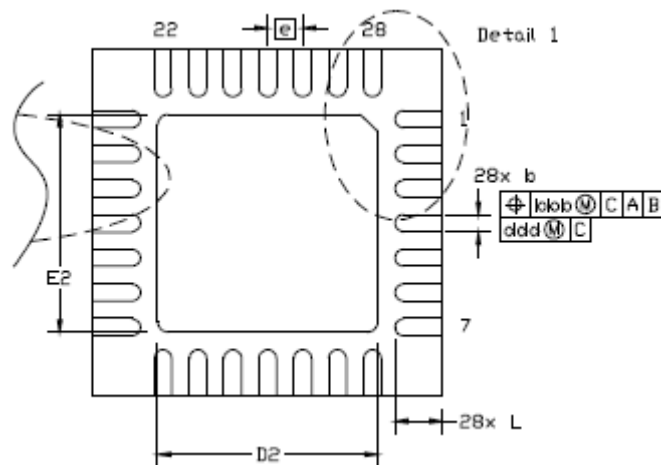
Fig. 4: QFN–28 Package Drawings - Bottom View

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Detail 1

Pin – 1 Identifier
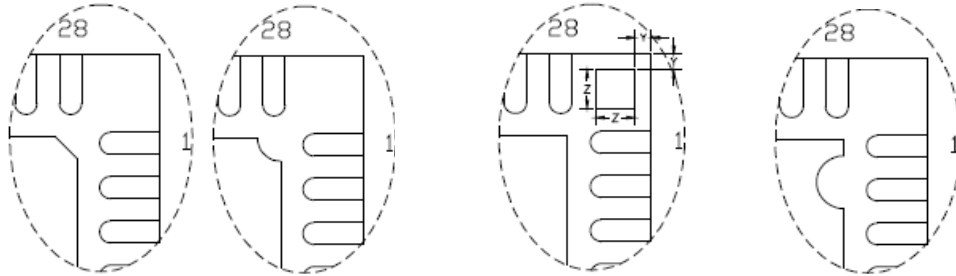
Option 1	Option 2	Option 3
Irregular Corner	Comer Square	Irregular Edge

Detail 2

Perimeter Lead Form
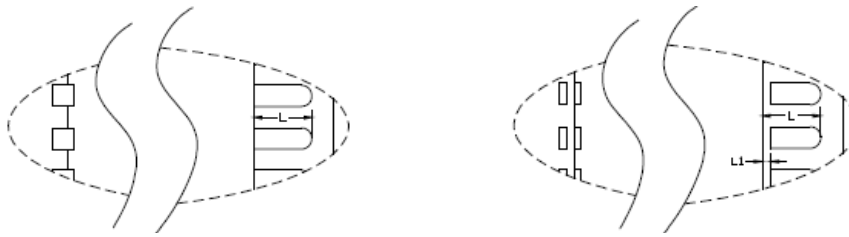
Option 1	Option 2
Edge Exposed	Edge Pull–Back

Fig. 5 QFN-28 Package Drawing

Dimension	Min	Typ	Max
A	0.80	0.90	1.00
A1	0.00	0.02	0.05
A3		0.25 REF	
b	0.18	0.23	0.30
D		5.00 BSC.	
D2	2.90	3.15	3.35
e		0.50 BSC.	
E		5.00 BSC.	
E2	2.90	3.15	3.35

Dimension	Min	Typ	Max
L	0.35	0.55	0.65
L1	0.00	—	0.15
aaa		0.15	
bbb		0.10	
ddd		0.05	
eee		0.08	
Z		0.44	
Y		0.18	

Notes:
1. All dimensions shown are in millimeters (mm) unless otherwise noted.
2. Dimensioning and Tolerancing per ANSI Y14.5M-1994.
3. This drawing conforms to the JEDEC Solid State Outline MO-220, variation VHHD except for custom features D2, E2, Z, Y, and L which are toleranced per supplier designation.
4. Recommended card reflow profile is per the JEDEC/IPC J-STD-020 specification for Small Body Components.

Table 1   QFN-28 Package Dimensions