



August 30, 2007

PCN Number: 0713

PCN Change Level: Major

Subject: Pin Out Changes for the Fusion Product Family

Dear Customer,

This PCN provides information on changes in the pin outs for all packages for AFS090, AFS250, AFS600, and AFS1500 devices. Affected devices and packages are listed in Table 1. These pin out changes were made to increase the ESD robustness of the devices.

Table 1 • Fusion Pin Changes

Device	Package	Old Pin #	Old Pin Name	New Pin #	New Pin Name
AFS090	QNG108	B25	V _{CC33ACAP}	B25	V _{CC33A}
	QNG180	B29	V _{CC33ACAP}	B29	V _{CC33A}
	FG256/FGG256	T14	V _{CC33ACAP}	T14	V _{CC33A}
AFS250	QNG180	B29	V _{CC33ACAP}	B29	V _{CC33A}
	PQ208/PQG208	102	V _{CC33ACAP}	102	V _{CC33A}
	FG256/FGG256	T14	V _{CC33ACAP}	T14	V _{CC33A}
AFS600	PQ208/PQG208	102	V _{CC33ACAP}	102	V _{CC33A}
	FG256/FGG256	T14	V _{CC33ACAP}	T14	V _{CC33A}
	FG484/FGG484	AB18	V _{CC33ACAP}	AB18	V _{CC33A}
AFS1500	FG256/FGG256	T14	V _{CC33ACAP}	T14	V _{CC33A}
	FG484/FGG484	AB18	V _{CC33ACAP}	AB18	V _{CC33A}
	FG676/FGG676	AD20	V _{CC33ACAP}	AD20	V _{CC33A}

Devices that do not have the pin change, but must update the capacitor value:

- AFS250XW
- AFS600XX, AFS600XY, AFS600XZ, and AFS600ES (date codes before 0738)



For existing board designs, Actel recommends connecting the previous $V_{CC33ACAP}$ pad to the same 3.3 V supply as the V_{CC33A} pads. If customers do not want to change their board, the $V_{CC33ACAP}$ pad can be connected to a 100 pF cap to ground.

For all new designs, Actel recommends connecting all V_{CC33A} pads to the same 3.3 V supply.

Previous Fusion datasheets (prior to Advanced v0.8 released in June 2007) recommended using $V_{CC33ACAP}$ 1 uF cap to GND. After conducting additional analysis, Actel determined that if the V_{CC33A} power supply ramps up too quickly, then an internal transistor on the device could be stressed. While Actel has not seen this occur on any devices, the recommended capacitor value has been changed to provide more margin for customers. Therefore, to avoid causing permanent damage to the device, Actel strongly recommends that a capacitor of 100 pF be used.

The Fusion datasheet will be updated by the end of September 2007 and will be posted at: http://www.actel.com/documents/Fusion_DS.pdf

If you have any questions, please contact Actel's Application Technical Support at tech@actel.com.

Regards,

Actel Corporation