Advantech AE Technical Share Document
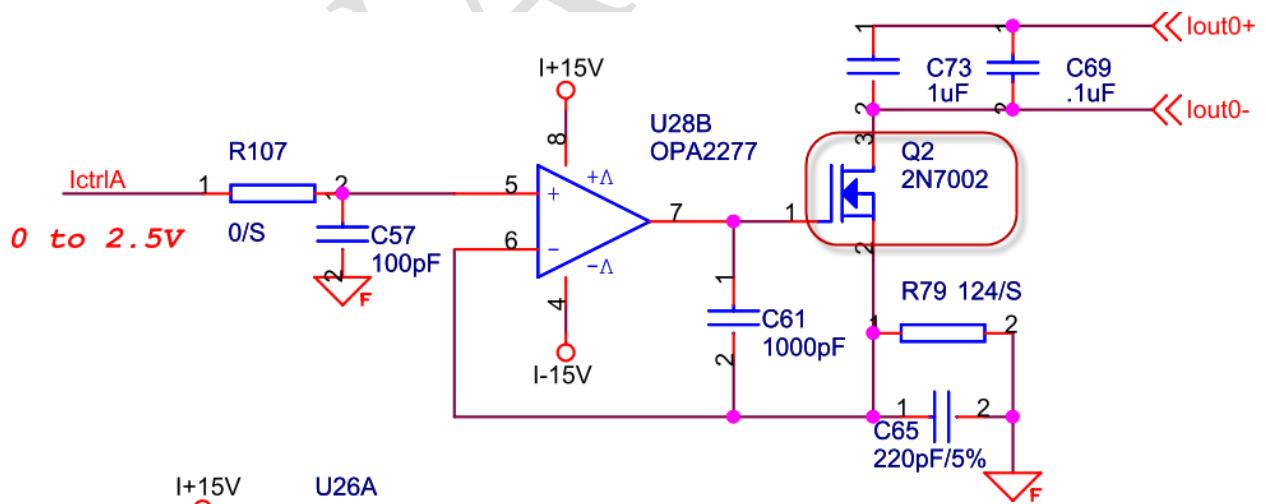
Date	2015/03/26	SR#	1-2029550951
Category	■FAQ □SOP	Related OS	N/A
Abstract	ADAM-4024_Current output interference issue		
Keyword	ADAM-4024, Current, Output, Error, Not accurate.		
Related Product	ADAM-4024		

■ **Problem Description**:

The current output of different channels will interfere each other while the negative side of I out- are shorted together.

■ **Brief Solution - Step by Step**:

The problem is result from the internal circuit design of ADAM-4024 (The issue also will happen on ADAM-6024 for the same application scenario)

Take the picture above to explain the situation more clearly, the output of the current is controlled by the MOSFET (Q2) in the picture.

Because Q2 is located at the I out- side of the circuit (i.e. the loopback current AFTER the customer's loading), if the GND of different channels are shorted together, the current may loop out from one channel and loop back to the other , which caused the inaccuracy and interference for current output control.

[Solution]

We improve this known issue in the circuit design of ADAM-6224.

The current is controlled by the transistor (Q6 in the following picture) which located at I out+ side (i.e. before the loading of the customer) so that we can guarantee the output still have good accuracy within shorted GND.