

## NY9M Motor Driver IC SOP8/ESOP8 PCB Layout

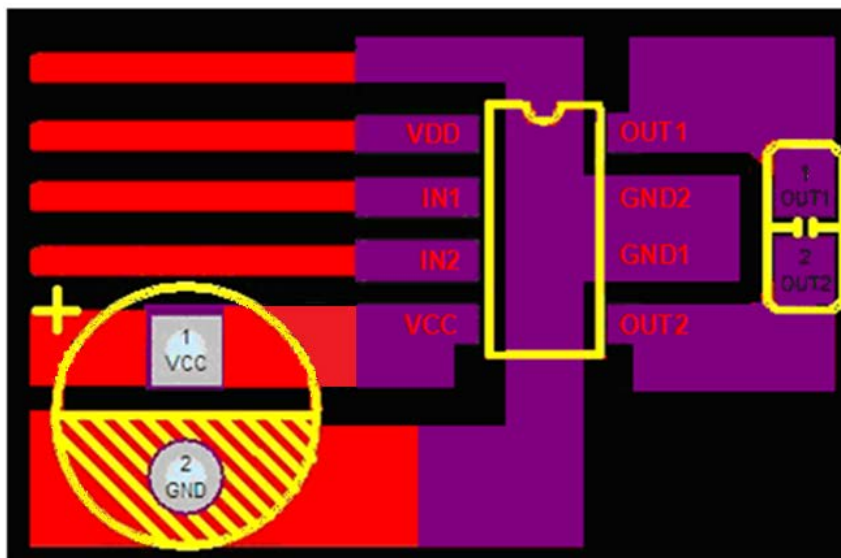
**Description:** Please take care components and PCB heat dispatching during Layout PCB for design NY9M series Motor Driver IC.

**Root cause:** When NY9M application works on VCC=6V or higher, bouncing voltage on output pins will breakdown IC internally. Especially just during power applied on IC or suddenly stops motor by a force. Or heat dispatching is not enough for high current then makes Thermal Shutdown (TSD) happens.

**Layout Solution:** Please notice following items when NY9M works over 6V (more than 4 batteries):

1. Reserve a 104 cap (0.1uF) near to chip between OUT1 & OUT2 to avoid inrush current from motor.
2. Reserve location close to IC for electrolytic capacitor on VCC for 10uF as minimum. Cap size should also increase by higher Voltage & Current.
3. There are 5 pins at large current path: VCC, OUT1, OUT2, GND1 and GND2. Please make copper-foil area increased on these pins and without cover solder-mask. Copper exposed to air on PCB without solder-mask were able to help heat dispatching and to avoid heat increased to reach Thermal Shutdown temperature.

### PCB Layout Example:



**Please Notice:** Purple colors were copper without cover solder-mask.