

General Description

The MIC94052/94053 are low on-resistance, 84mΩ(max) P-channel MOSFETs. They are housed in a *Teeny™* SC-70-6 package.

Designed for high-side switch applications where space is critical, the MIC94052/3 exhibit a typical on-resistance of 70mΩ at 4.5V gate-to-source voltage. The devices operate down to 1.8V gate-to-source voltage. Their operating voltage range makes the MIC94052/3 ideal for Li Ion applications as well as other sub-5V load switch applications.

The MIC94053 is an option that includes an internal gate pull-up resistor. The pull-up resistor ensures that the P-channel MOSFET is OFF until actively pulled down. Integrating the pull-up resistor saves valuable board space and reduces component placement cost.

The MIC94052/3 have a junction temperature range of -40°C to +150°C.

Features

- 1.8V to 5.5V input voltage range
- Low on-resistance P-channel MOSFET:
 - 70mΩ at $V_{GS} = 4.5V$ (typ)
 - 2A continuous current
- V_{GS} pull-up resistor (MIC94053)
- *Teeny™* SC-70-6 package
- -40°C to +150°C junction temperature range

Applications

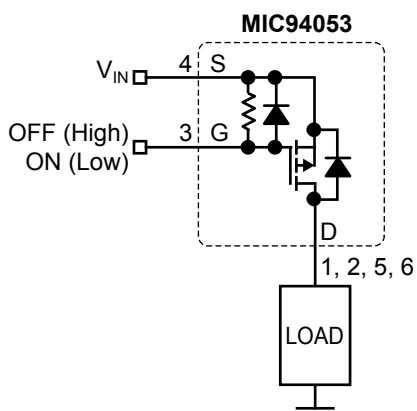
- Load switch in portable applications:
 - Cellular phones
 - PDA's
 - MP3 players
 - Notebook PCs
 - Barcode scanners

Ordering Information

| Part Number | | | | Gate-Source Pull Up | Junction Temp Range | Package |
|-------------|---------|-------------|----------|---------------------|---------------------|---------|
| Standard | Marking | Pb-Free | Marking* | | | |
| MIC94052BC6 | P52 | MIC94052YC6 | P52 | NO | -40°C to +150°C | SC-70-6 |
| MIC94053BC6 | P53 | MIC94053YC6 | P53 | YES | -40°C to +150°C | SC-70-6 |

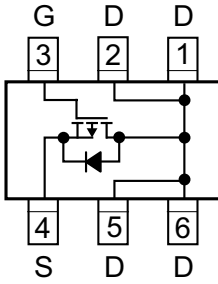
* Under bar symbol may not be to scale.

Typical Application

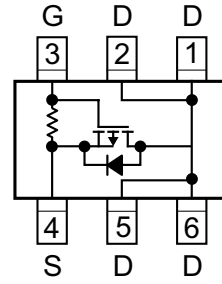


Load Switch Application

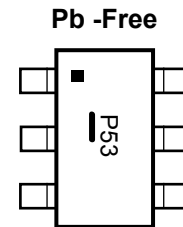
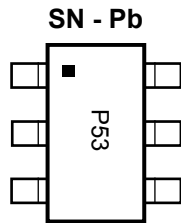
Pin Configuration



**MIC94052
SC-70-6 (C6)**



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SC-70-6 (C6)**

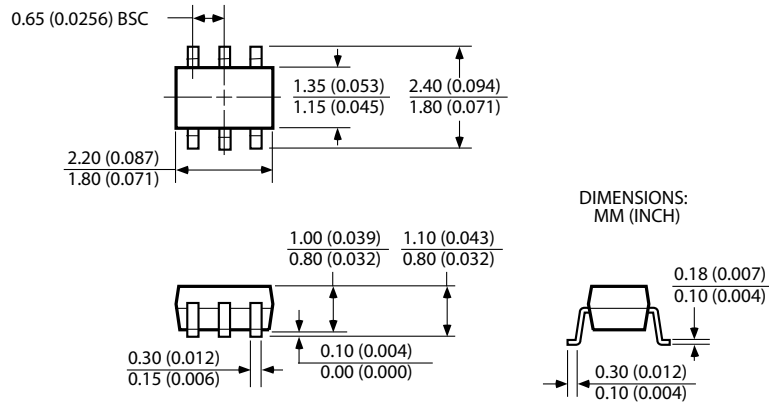


Package Marking - Top View

Pin Description

| Pin Number | Pin Name | Pin Function |
|------------|----------|---|
| 1, 2, 5, 6 | D | Drain. Ensure that all drain pins are connected together to optimize R _{DS(ON)} performance. |
| 3 | G | Gate |
| 4 | S | Source |

Package Information



SC-70-6 Pin (C6)

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