

**6 MOSFET Multi-Chip Module**  
**PRELIMINARY SPECIFICATION**

**DESCRIPTION**

The MM196 is a Multi-Chip Module, MCM, incorporating 6 independent MOSFET die into a convenient BGA package. This device is also available as discrete individual packaged Powermite3, see Microsemi data sheet UPF1N100. This device is also available as bare die, see Microsemi data sheet MSAFA1N100D. The MM196 allows users to externally connect the MOSFETs via a motherboard or next assembly substrate into any configuration desired. Custom variations of this product incorporating other Microsemi protection die and/or passive components are available by contacting the factory.

**KEY FEATURES**

- Miniature size, Multi-Chip Module, MCM
- Convenient mounting, Ball Grid Array, BGA
- Sn63/Pb37 solder bumps (Alternate attach methods available)
- Maximum switch voltage 1000V

**APPLICATIONS/BENEFITS**

- Three phase switching
- AC-DC converters
- Applications utilizing multiple MOSFET die in multiple or array configurations

**IMPORTANT:** For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

**INDIVIDUAL COMPONENT SPECIFICATIONS**

Components	Manufacturer	Part Number
Q1 – Q6	Microsemi Santa Ana	MSAFA1N100D

**Characteristics**

Note: Refer to individual data sheets for component performance. If there are conflicting requirements, this document takes precedence.

**Maximum Ratings @ 25°C**

(UNLESS OTHERWISE SPECIFIED)

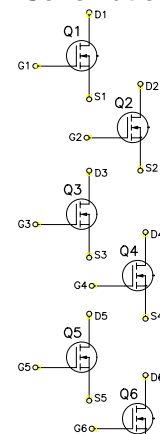
Parameter	Symbol	Min	Max	Unit
Peak Repetitive Drain to Source Voltage	$V_{DSS}$		1000	V
Operating Temperature Range	$T_{op}$	10	55	°C

**Maximum Ratings @ 25°C**

(UNLESS OTHERWISE SPECIFIED)

Description	Conditions	TYP	Max	Unit
Drain-Source On-State Resistance, $R_{DS(ON)1}$	$V_{GS} = 10 \text{ Vdc}$ , $I_D = 1 \text{ mAdc}$	12.5	13.5	ohm
Drain-Source On-State Resistance, $R_{DS(ON)2}$	$V_{GS} = 7 \text{ Vdc}$ , $I_D = 5...150 \text{ mAdc}$ $T_C = 37^\circ\text{C}$	12.5		ohm

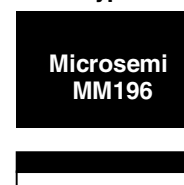
**Schematic**



**Configuration and Dimensions**

Top View

0.38" typical



0.35" typical

0.050" max