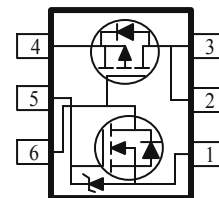
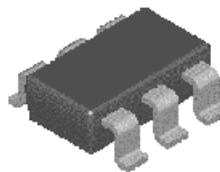


These miniature surface mount MOSFETs utilize High Cell Density process. Low $r_{DS(on)}$ assures minimal power loss and conserves energy, making this device ideal for use in power management circuitry. Typical applications are power switching, power management in portable and battery-powered products such as computers, printers, PCMCIA cards, cellular and cordless telephones.

- Low $r_{DS(on)}$ Provides Higher Efficiency and Extends Battery Life
- Miniature TSOP-6 Surface Mount Package Saves Board Space
- Control N-Channel MOSFET include a Zener Diode to protect the ESD requirement

PRODUCT SUMMARY		
V _{IN} (V)	r _{DS(on)} (OHM)	I _L (A)
5.0	0.068 @ V _{DROP} = 0.2V	2.8
2.5	0.100 @ V _{DROP} = 0.2V	1.9



ABSOLUTE MAXIMUM RATINGS (T _A = 25 °C UNLESS OTHERWISE NOTED)			
Parameter	Symbol	Rating	Units
Input Voltage Range	V _{IN}	2.5 - 8	V
On/Off Voltage Range	V _{ON/OFF}	1.5 - 8	
Continuous Load Current ^a	T _A =25°C	-2.5	A
	T _A =70°C	-1.8	
Pulsed Drain Current ^b	I _{LM}	-10	
Electrostatic Discharge Rating	ESD	6	KV
Power Dissipation ^a	T _A =25°C	0.7	W
	T _A =70°C	0.56	
Operating Junction and Storage Temperature Range	T _J , T _{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS			
Parameter	Symbol	Maximum	Units
Maximum Junction-to-Ambient ^a	t ≤ 5 sec	180	°C/W
	Steady-State	235	

Notes

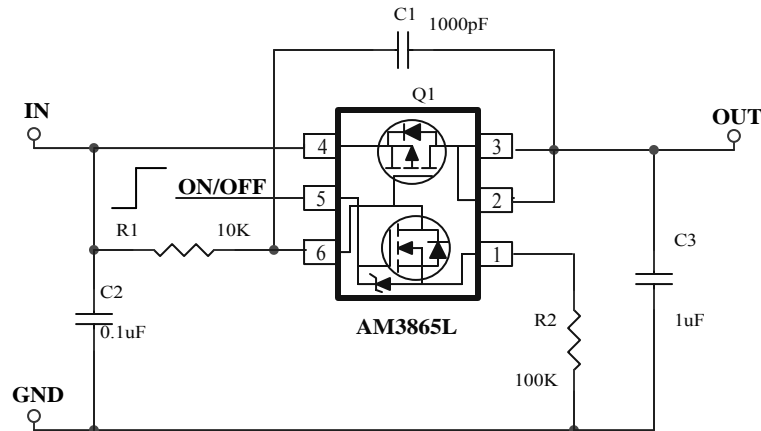
- a. Surface Mounted on 1" x 1" FR4 Board.
- b. Pulse width limited by maximum junction temperature



AM3865L

SPECIFICATIONS ($T_A = 25^{\circ}\text{C}$ UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Conditions	Limits			Unit
			Min	Typ	Max	
Switching On Characteristics						
Conduction Voltage	V_{DROP}	$V_{\text{IN}} = 5\text{ V}, V_{\text{ON/OFF}} = 3.3\text{ V}, I_{\text{L}} = 2.8\text{ A}$		0.13	0.2	V
		$V_{\text{IN}} = 5\text{ V}, V_{\text{ON/OFF}} = 3.3\text{ V}, I_{\text{L}} = 1.9\text{ A}$		0.15	0.2	
Loading Current	I_{L}	$V_{\text{DROP}} = 0.2\text{ V}, V_{\text{in}} = 5\text{ V}, V_{\text{ON/OFF}} = 3.3\text{ V}$	-2.8			A
		$V_{\text{DROP}} = 0.2\text{ V}, V_{\text{in}} = 2.5\text{ V}, V_{\text{ON/OFF}} = 3.3\text{ V}$	-1.9			
Static On Resistance	$R_{(\text{ON})}$	$V_{\text{GS}} = -5\text{ V}, I_{\text{D}} = -2.5\text{ A}$		47	69	m Ω
		$V_{\text{GS}} = -2.5\text{ V}, I_{\text{D}} = -2.0\text{ A}$		73	100	
Switching Off Characteristics						
Forward Leakage Current	I_{FL}	$V_{\text{IN}} = 8\text{ V}, V_{\text{ON/OFF}} = 0\text{ V},$			1	μA

Application In Load Switch



Notes

- a. Pulse test: $PW \leq 300\mu\text{s}$ duty cycle $\leq 2\%$.
- b. Guaranteed by design, not subject to production testing.