



# MC28L05

## Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Maximum output current  $I_o$ :100mA
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

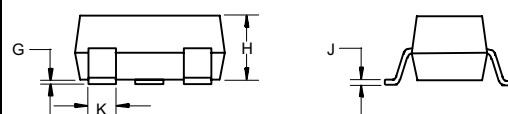
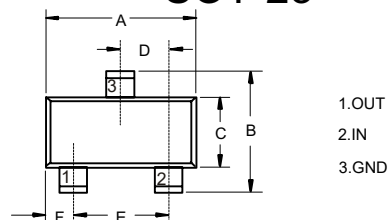
Symbol	Rating	Rating	Unit
$V_I$	Input Voltage Range	-30~+45	V
$T_{OPR}$	Operating Ambient Temperature Range	-40~+85	°C
$T_{STG}$	Storage Temperature Range	-55~+150	°C
$R_{thJA}$	Thermal Resistance From Junction to Ambient	285	°C/W

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Input voltage	$V_I$	$I_o=10mA$	4.75		40	V
Output voltage	$V_O$	$I_o=10mA$	4.9	5	5.1	V
Load regulation	$\Delta V_o$	$I_o=1mA-100mA$		0.6		%
Line regulation	$\Delta V_o$	$7V \leq V_i \leq 24V, V_o=5V, I_o=1mA$		0.02		%/V
		$7V \leq V_i \leq 45V, V_o=5V, I_o=1mA$		0.1		%/V
Quiescent current	$I_q$	$V_i=7V, \text{No load}$			15	$\mu A$
		$V_i=24V, \text{No load}$			16	$\mu A$
		$V_i=40V, \text{No load}$			20	$\mu A$
Dropout Voltage	$V_d$	$I_o=1mA$			12	mV
		$I_o=100mA$			1200	mV
Output noise voltage	$V_N$	$I_o=10mA$	-100		100	$\mu V$
Ripple rejection	RR	$V_i=7V, f=100Hz$		60		dB
		$V_{pp}=0.5V, f=1kHz$		45		dB
		$I_o=1mA, f=10kHz$		35		dB
Maximum output current	$I_{PK}$	$R_L=1\Omega$	180		460	mA
Thermal protection	$T_{SD}$	$I_o=1mA$		165		°C
Thermal protection Hys	$T_{SD\_HYS}$	$I_o=1mA$		30		°C
Temperature coefficient	$\Delta V_o/\Delta T$	$I_o=1mA$		$\pm 0.5$		mV/°C

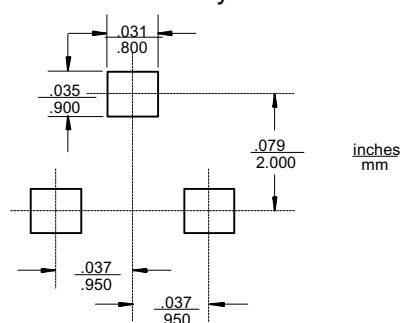
## Three-terminal Voltage Regulators

### SOT-23

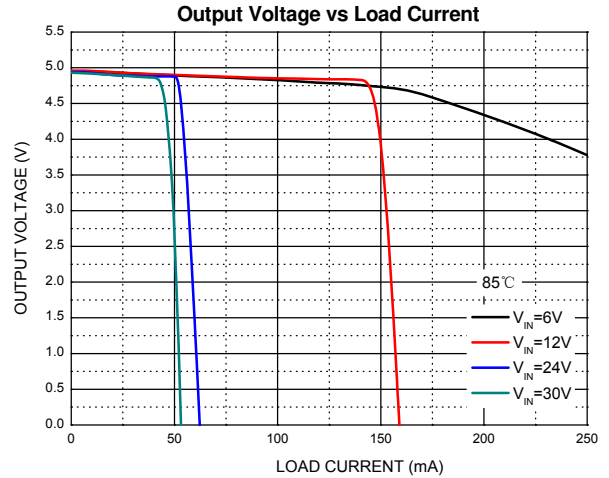
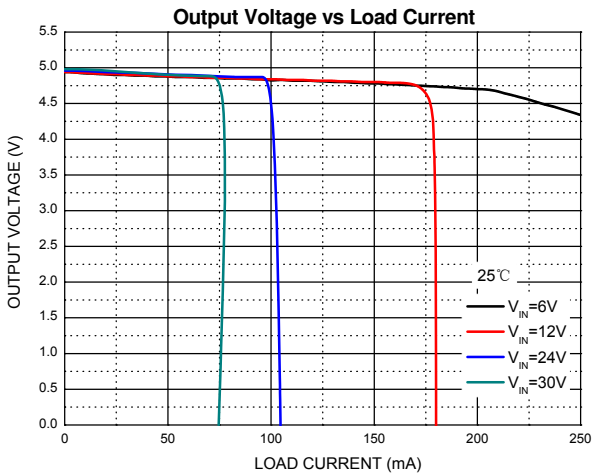
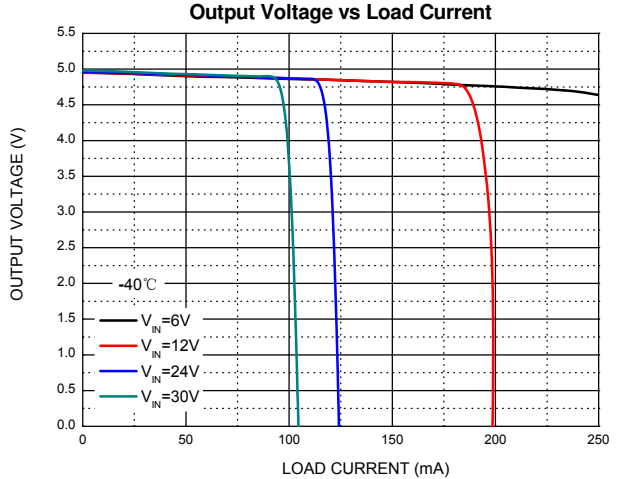
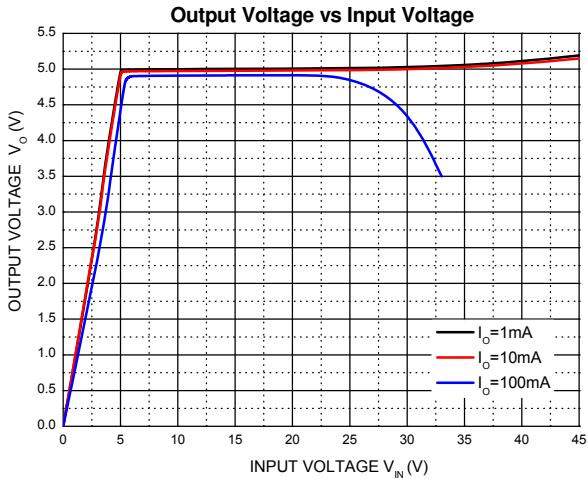
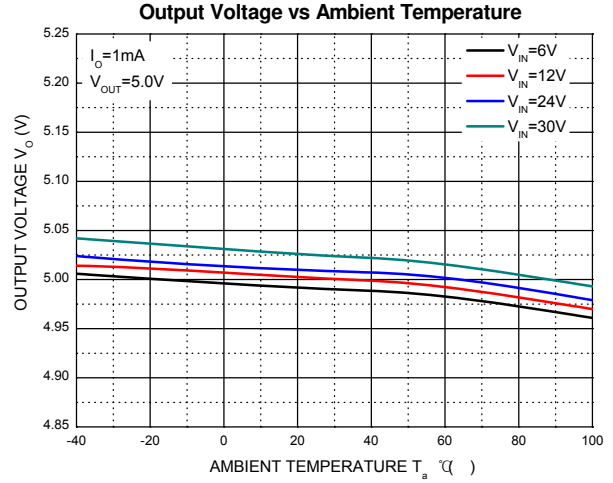
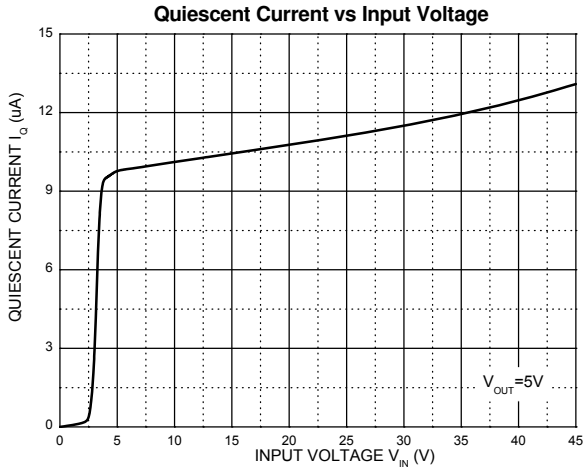


DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

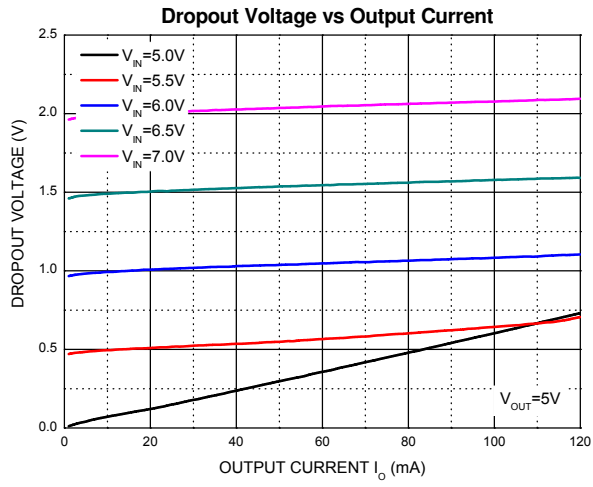
### Suggested Solder Pad Layout



# Typical Characteristics



### Typical Characteristics





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### Ordering Information :

Device	Packing
Part Number-TP	Tape & Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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