



# MC28L05F

## Three-terminal Voltage Regulators

### 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

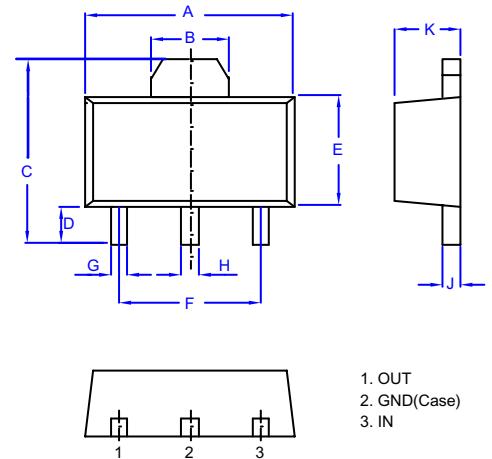
### Maximum Ratings

Symbol	Rating	Rating	Unit
$V_i$	Input Voltage Range	-0.3~+45	V
$T_{OPR}$	Operating Ambient Temperature Range	-40~+85	°C
$T_{STG}$	Storage Temperature Range	-55~+150	°C

### Electrical Characteristics @ 25°C Unless Otherwise Specified

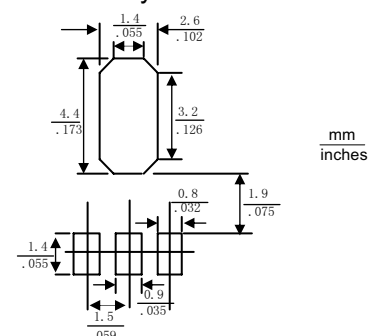
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Input voltage	$V_i$	$I_o=10mA$	4.75		40	V
Output voltage	$V_o$	$I_o=10mA$	4.9	5	5.1	V
Load regulation	$\Delta V_o$	$I_o=1mA-100mA$		0.6		%
Line regulation	$\Delta V_o$	$7V \leq V_i \leq 24V, V_o=5V, I_o=1mA$		0.02		%/V
		$7V \leq V_i \leq 45V, V_o=5V, I_o=1mA$		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 hysteresis	$T_{SD\_HYS}$	$I_o=1mA$		30		°C
Temperature coefficient	$\Delta V_o/\Delta T$	$I_o=1mA$		$\pm 0.5$		mV/°C

### SOT-89

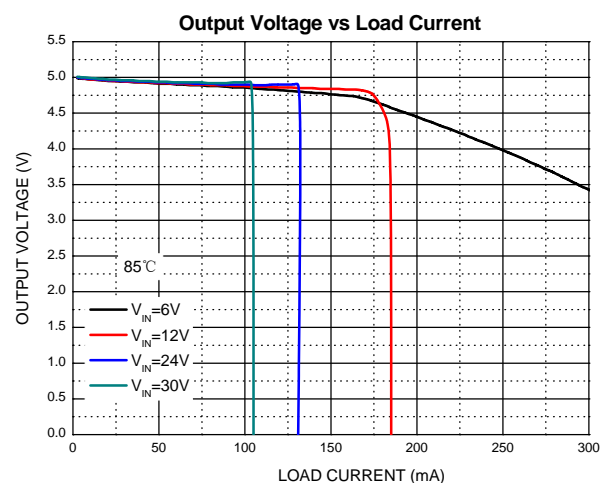
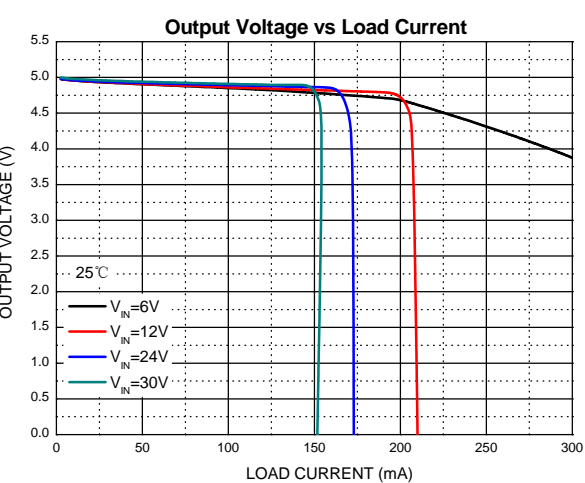
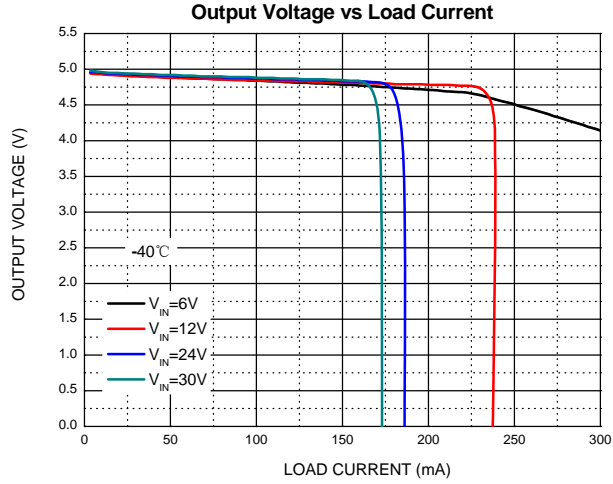
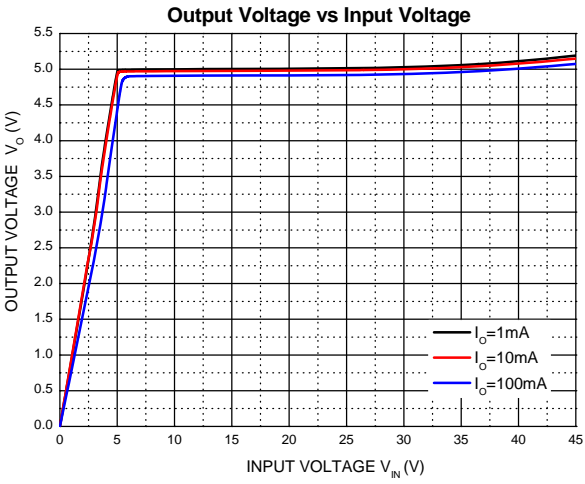
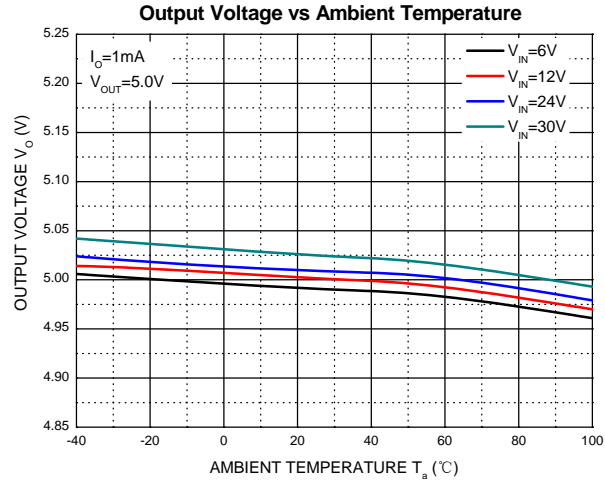
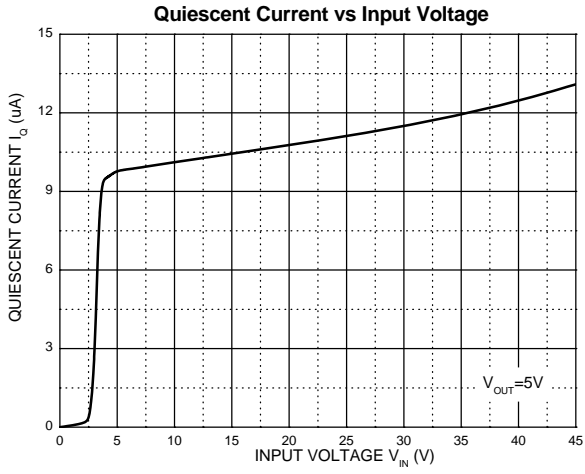


DIM	DIMENSIONS				NOTES
	INCHES		MM		
A	.173	.181	4.39	4.60	REF.
B	.061	----	1.55	----	
C	.154	.165	3.91	4.25	TYP
D	.031	.047	0.80	1.20	
E	.092	.100	2.34	2.54	
F	.118	----	3.00	----	
G	.013	.020	0.33	0.52	
H	.015	.021	0.38	0.53	
J	.014	.017	0.35	0.44	
K	.055	.063	1.40	1.60	

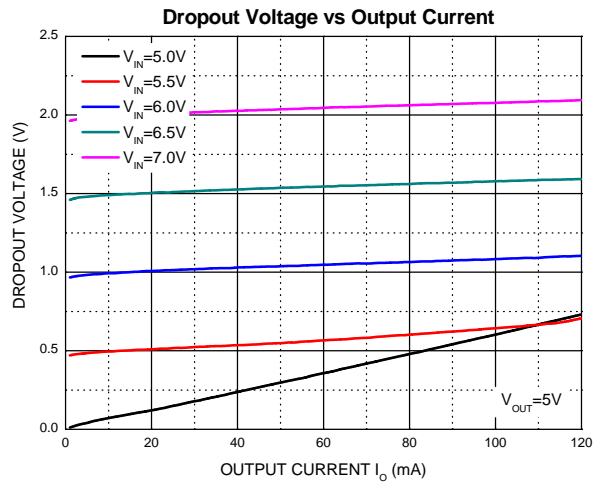
### Suggested Solder Pad Layout



# Typical Characteristics



### Typical Characteristics





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## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 1Kpcs/Reel

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

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