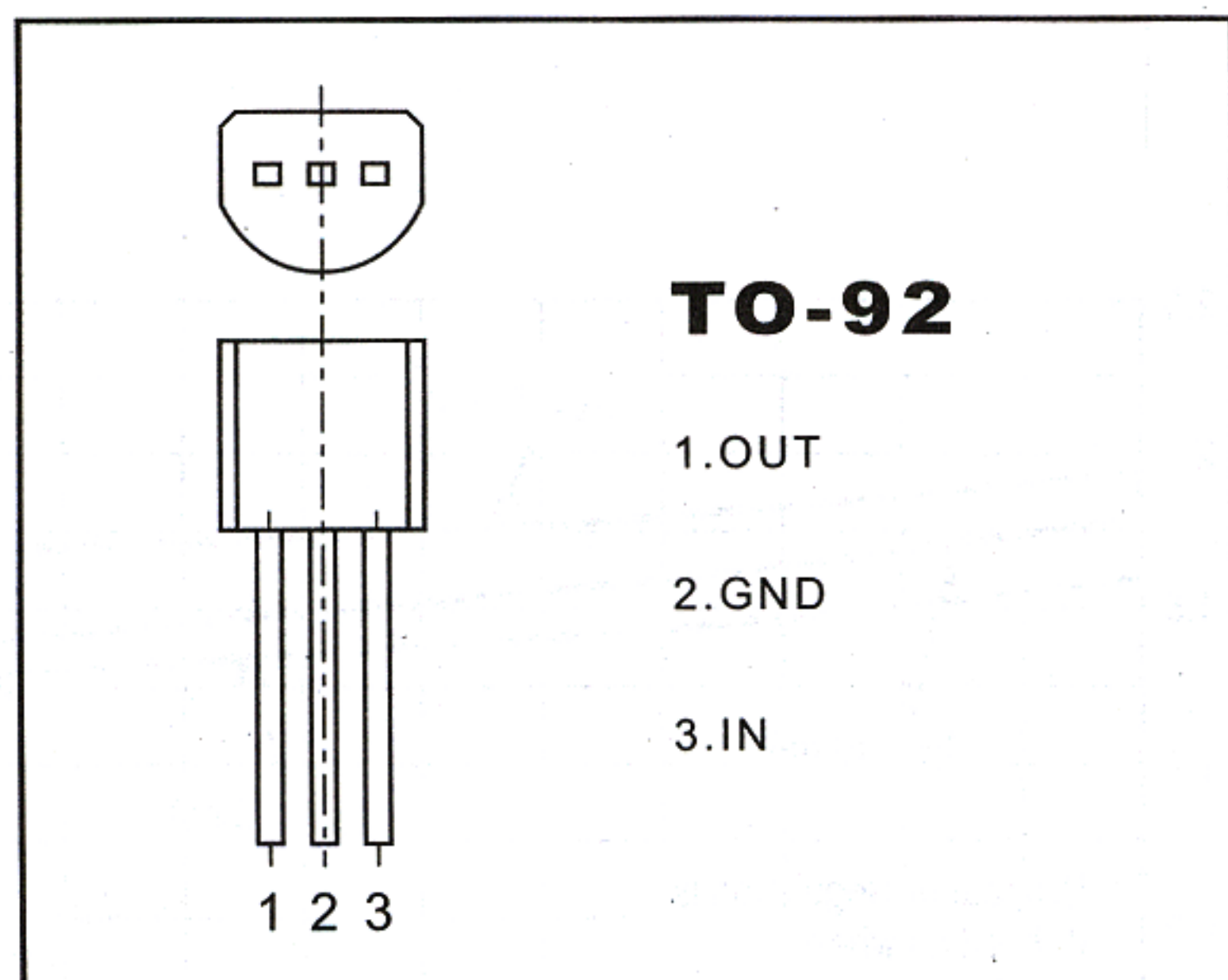


Three-Terminal Low Current Voltage Regulators

CJ78L05 Three-terminal positive voltage regulator



FEATURES

Maximum Output current

I_{OM} : 0.1 A

Output voltage

V_o : 5V

ABSOLUTE MAXIMUM RATINGS

(Operating temperature range applies unless otherwise specified)

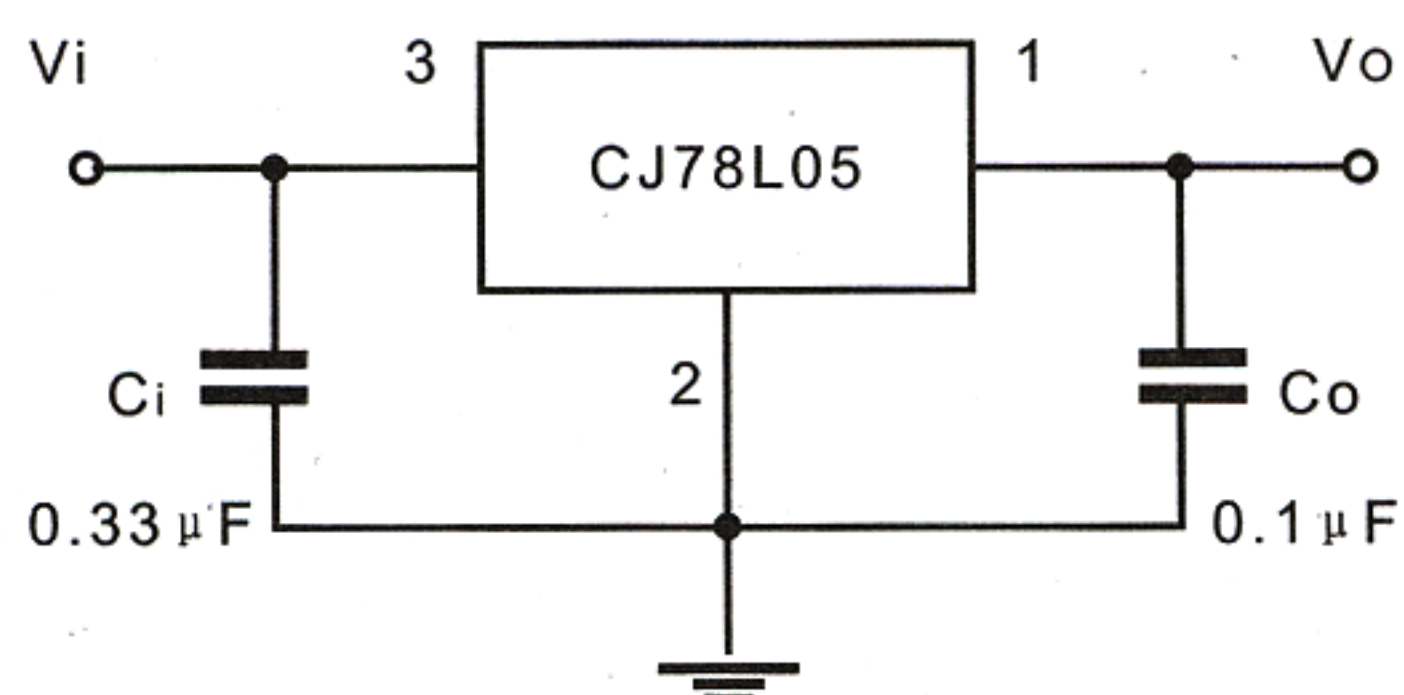
Parameter	Symbol	Value	Units
Input voltage	V_i	30	V
Operating junction temperature range	T_{opr}	-20-+120	°C
Storage temperature range	T_{stg}	-55-+150	°C

ELECTRICAL CHARACTERISTICS

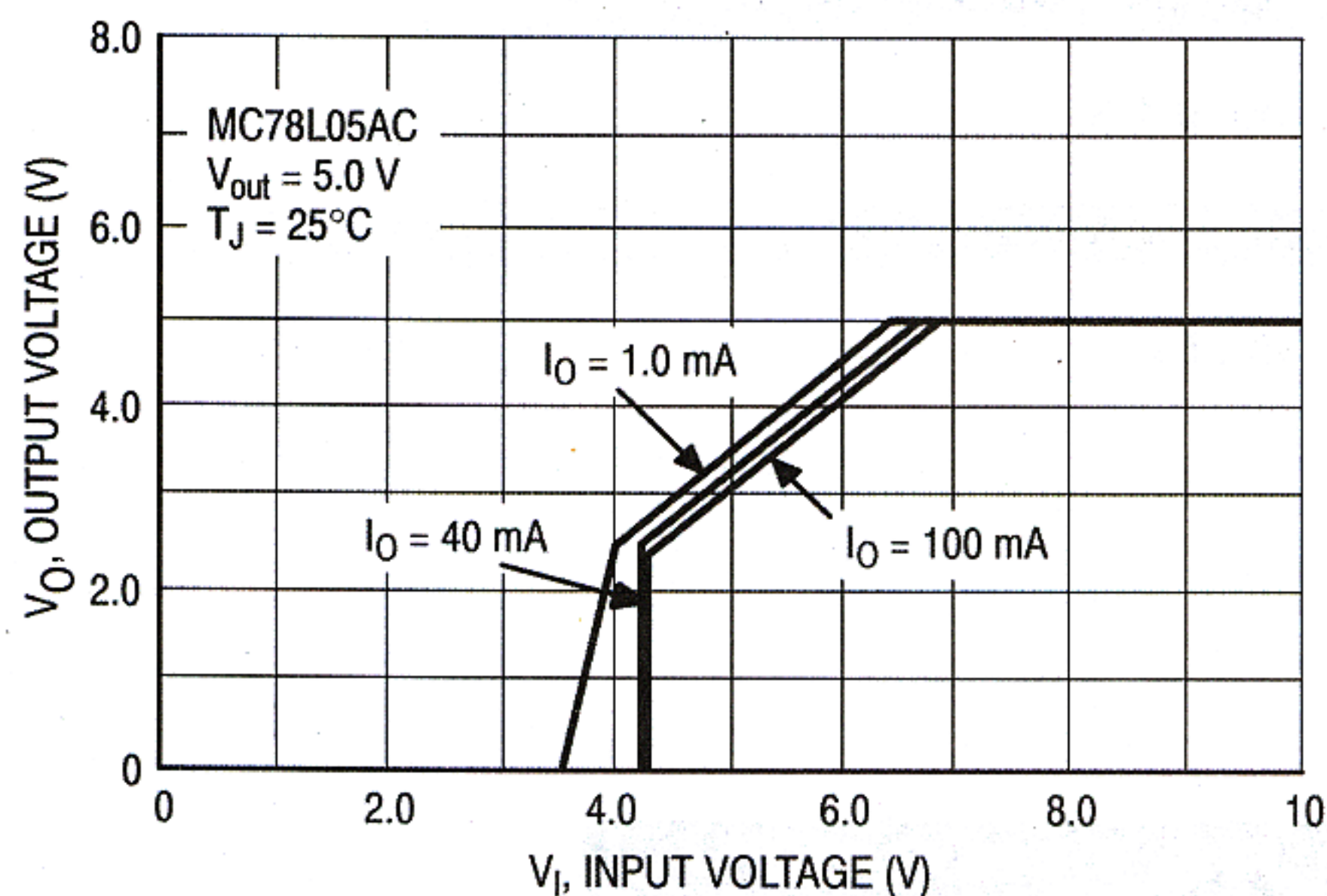
($V_i=10V$, $I_o=40mA$, $0^\circ C < T_j < 125^\circ C$, $C_1=0.33 \mu F$, $C_o=0.1 \mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25^\circ C$	4.8	5.0	5.2	V
		$7V \leq V_i \leq 20V$, $I_o=1mA \sim 40mA$	4.75		5.25	V
		$7V \leq V_i \leq V_{MAX}$, $I_o=1mA \sim 70mA$	4.75		5.25	V(note)
Load regulation	ΔV_o	$T_j=25^\circ C$, $I_o=1mA \sim 100mA$		11	60	mV
		$T_j=25^\circ C$, $I_o=1mA \sim 40mA$		5.0	30	mV
Line regulation	ΔV_o	$7V \leq V_i \leq 20V$, $T_j=25^\circ C$		8	150	mV
		$8V \leq V_i \leq 20V$, $T_j=25^\circ C$		6	100	mV
Quiescent current	I_q			2.0	5.5	mA
Quiescent current change	ΔI_q	$8V \leq V_i \leq 20V$			1.5	mA
		$1mA \leq I_o \leq 40mA$			0.1	mA
Output noise voltage	V_N	$10Hz \leq f \leq 100KHz$		40		μV
Ripple rejection	RR	$8V \leq V_i \leq 20V$, $f=120Hz$, $T_j=25^\circ C$	41	80		dB
Dropout voltage	V_d	$T_j=25^\circ C$		1.7		V

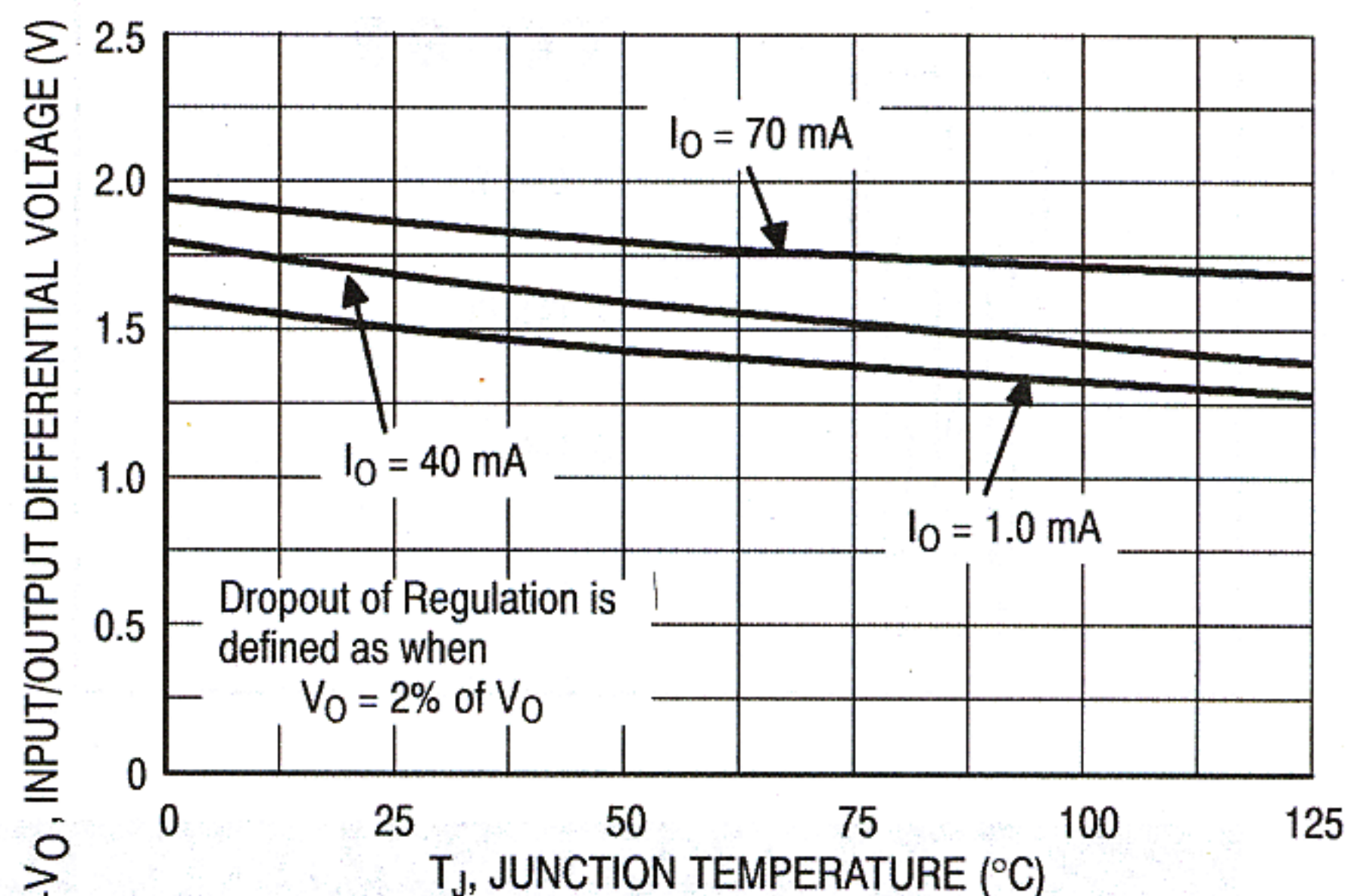
TYPICAL APPLICATION



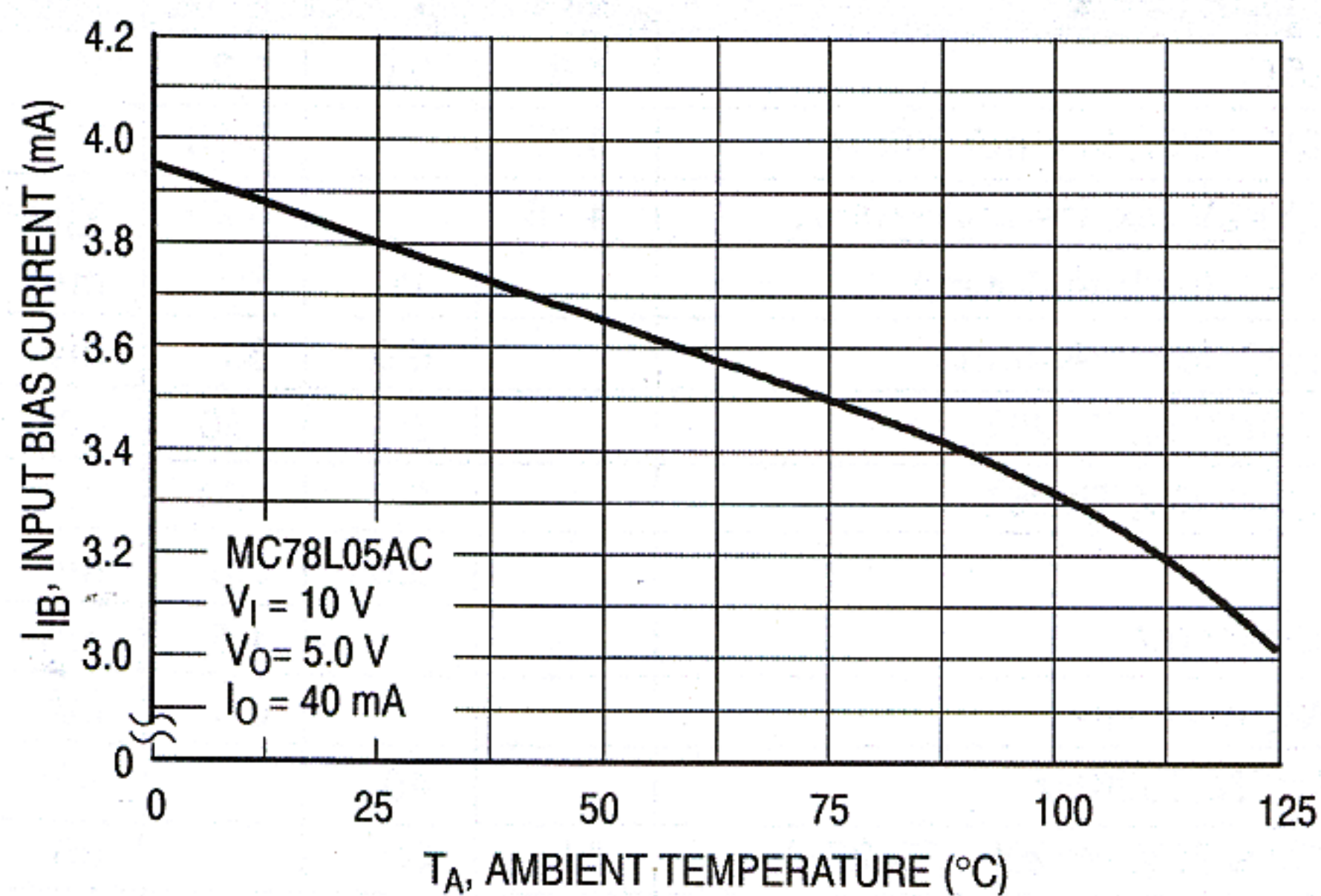
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.



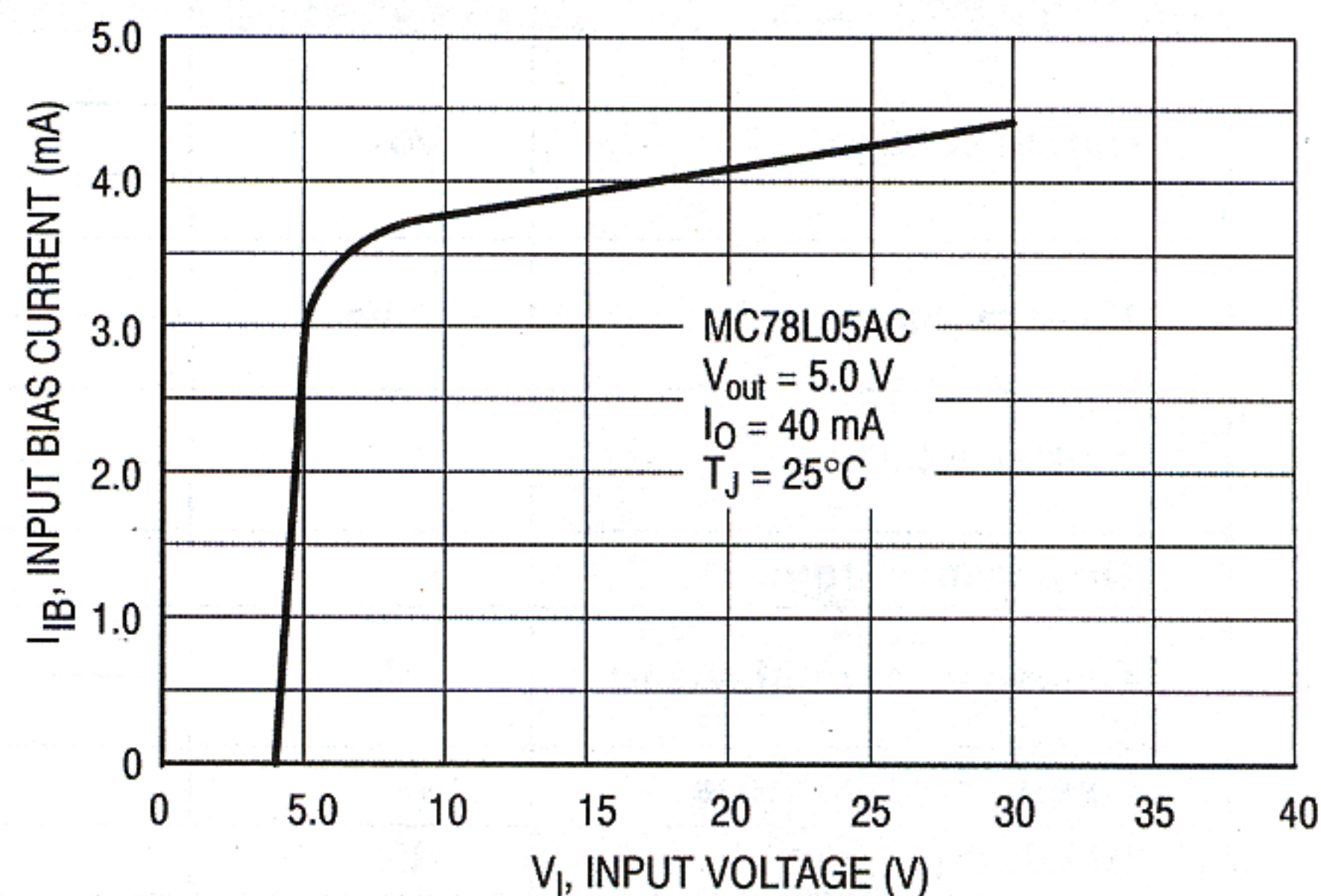
Dropout Characteristics



Dropout Voltage versus Junction Temperature



Input Bias Current versus Ambient Temperature



Input Bias Current versus Input Voltage