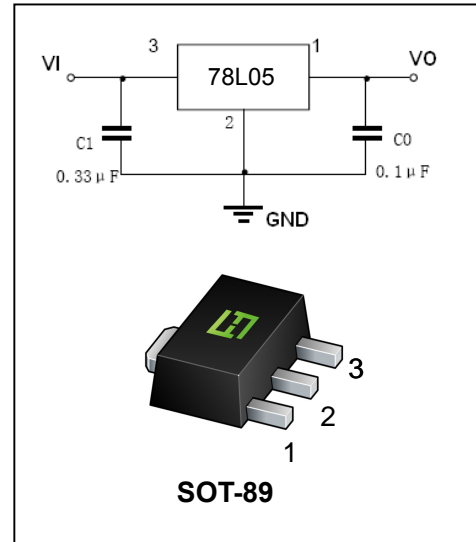


FEATURES

- Wide range of available, fixed output voltage.
- Low cost.
- Internal short-circuit current limiting.
- Internal thermal overload protection.
- No external components required.
- Complementary negative regulators offered (79L05).



ORDERING INFORMATION

Type No.	Marking	Package Code
78L05	78L05	SOT-89

MAXIMUM RATING operating temperature range applies unless otherwise specified

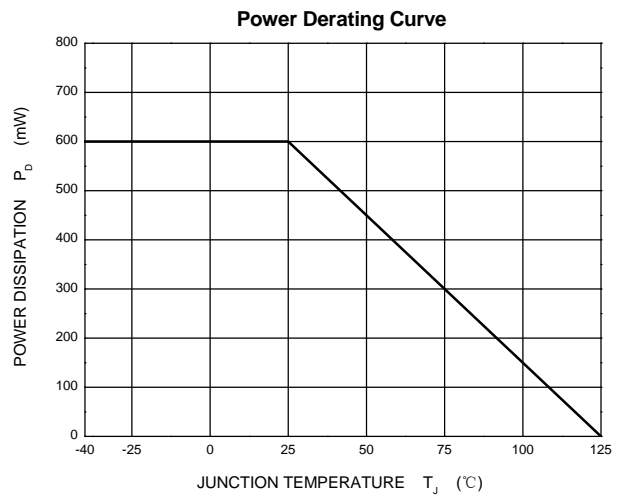
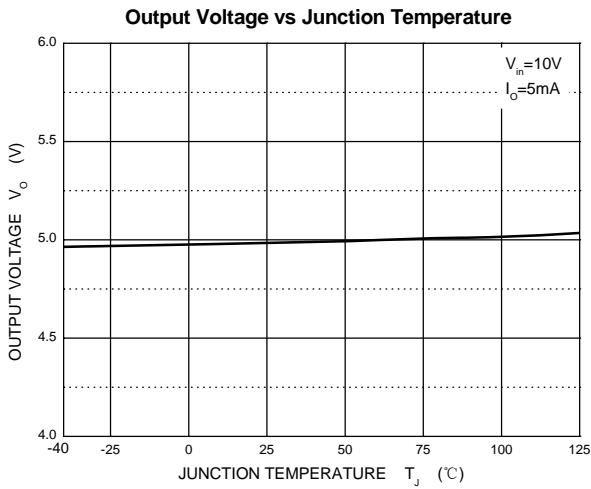
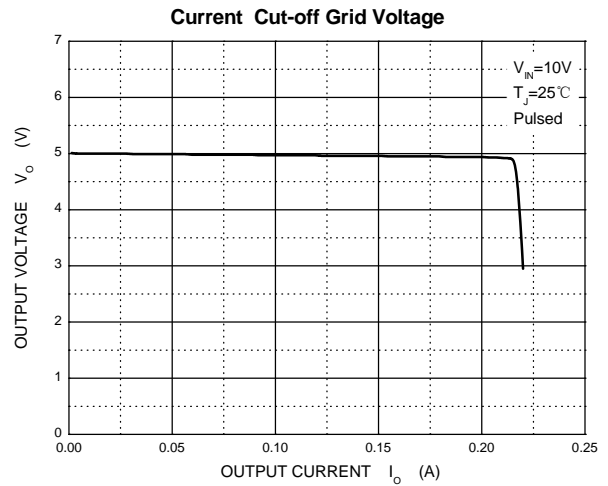
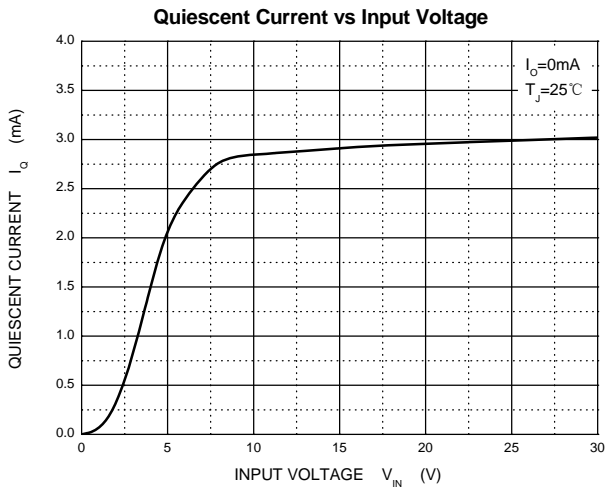
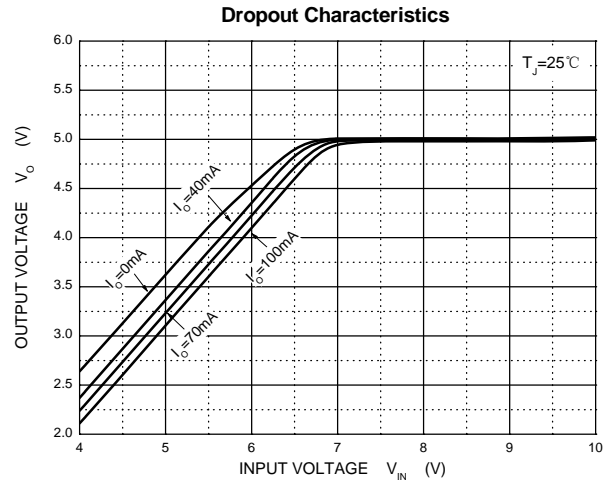
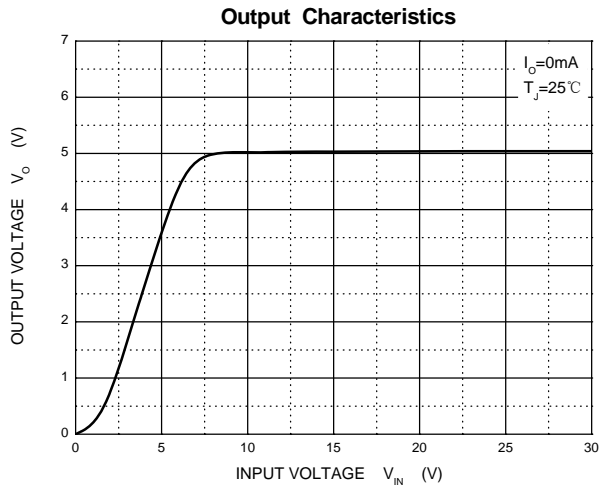
Symbol	Parameter	Value	Units
V_I	Input voltage	30	V
I_{CM}	Maximum output current	100	mA
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	250	°C/W
P_D	Power dissipation	500	mW
T_{OPR}	Operating junction temperature	-40 to +125	°C
T_j, T_{stg}	Storage temperature range	-40 to +150	°C

ELECTRICAL CHARACTERISTICS

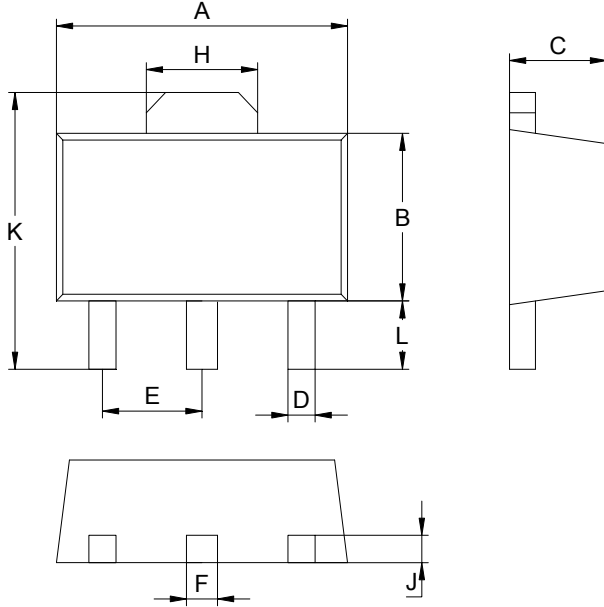
($V_{IN}=10V, I_o=40mA, 0^{\circ}C < T_j < 125^{\circ}C, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	78L05			UNIT
			MIN	TYP	MAX	
Output voltage	V_o	$T_j=25^{\circ}C$ $7V \leq V_i \leq 20V, I_o=1mA-40mA$ $V_i=10V, I_o=1mA-70mA$	4.8 4.75 4.75	5.0 - -	5.2 5.25 5.25	V
Load regulation	Reg_{load}	$T_j=25^{\circ}C, I_o=1mA-100mA$ $T_j=25^{\circ}C, I_o=1mA-40mA$	-	11 5	60 30	mV
Line regulation	Reg_{line}	$7V \leq V_i \leq 20V, T_j=25^{\circ}C$ $8V \leq V_i \leq 20V, T_j=25^{\circ}C$	-	55 45	150 100	mV
Input Bias Current	I_{IB}	$T_j=25^{\circ}C$ $T_j=125^{\circ}C$	- -	3.8 -	6.0 5.5	mA
Input Bias Current Change	ΔI_{IB}	$8V \leq V_i \leq 20V$ $1mA \leq I_o \leq 40mA$	-	-	1.5 0.1	mA
Output noise voltage	V_N	$10Hz \leq f \leq 100KHz$	-	40	-	μV
Ripple rejection	RR	$I_o=40mA, 8V \leq V_i \leq 18V, f=120Hz, T_j=25^{\circ}C$	41	49	-	dB
Dropout voltage	V_i-V_o	$T_j=25^{\circ}C$	-	1.7	-	V

Typical Characteristics

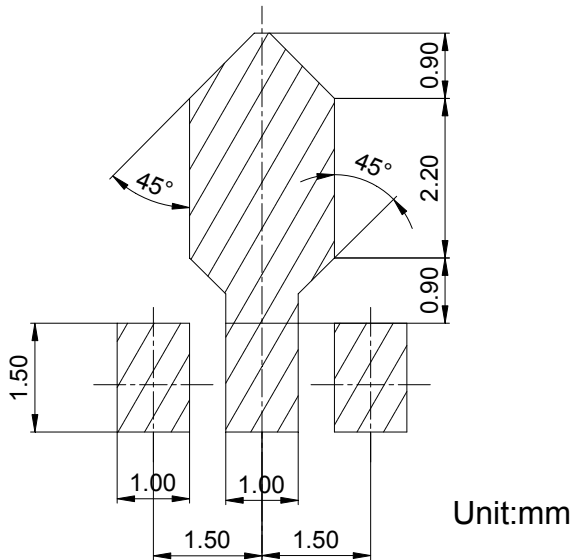


SOT-89 Package Outline Dimensions



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.20	2.70
C	1.30	1.70
D	0.30	0.60
E	1.40	1.60
F	0.30	0.60
H	1.40	1.80
J	0.30	0.60
L	0.90	1.10
K	3.75	4.35
All Dimensions in mm		

SOT-89 Suggested Pad Layout



PACKAGE INFORMATION

Device	Package	Shipping
78L05	SOT-89	1000/Tape&Reel