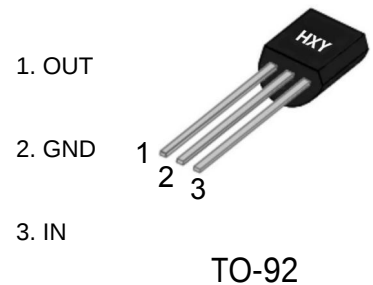




Features

- Available Output Voltage:5.0V
- Maximum Input Voltage:
30V for $V_{OUT} < 10V$
- Maximum Output Current:
Exceed 100mA at $T_J = 25^{\circ}C$
- Output Tolerances:
 $\pm 3\%$ at $T_J = 25^{\circ}C$
 $\pm 5\%$ over the Operating T_J
- No External Components

Pin Configuration



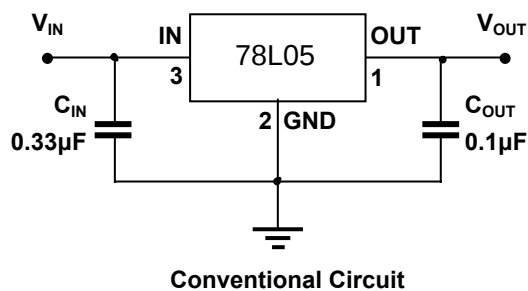
Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
78L05	TO-92	78L05	1000

Applications

- TV Board
- Air Conditioner
- Vehicle Mounted Radar
- Charging Device

Typical Application Circuit





Absolute Maximum Ratings

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Maximum input voltage	V_{IN}	30	V
Maximum junction temperature	$T_{J\ Max}$	150	°C
Storage temperature	T_{stg}	- 65 ~ 150	°C
Soldering temperature & time	T_{solder}	260°C, 10s	-

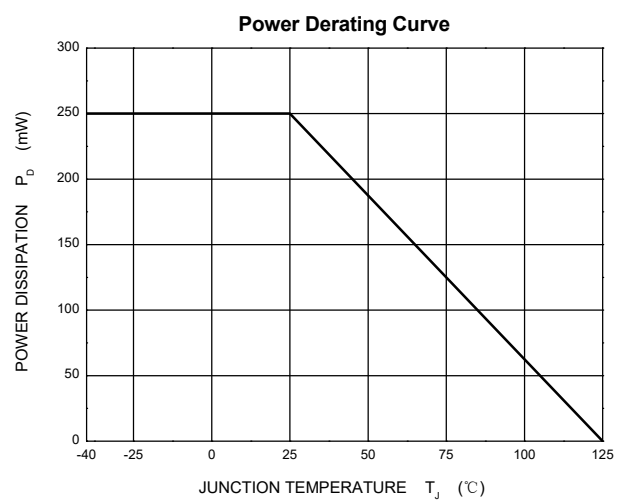
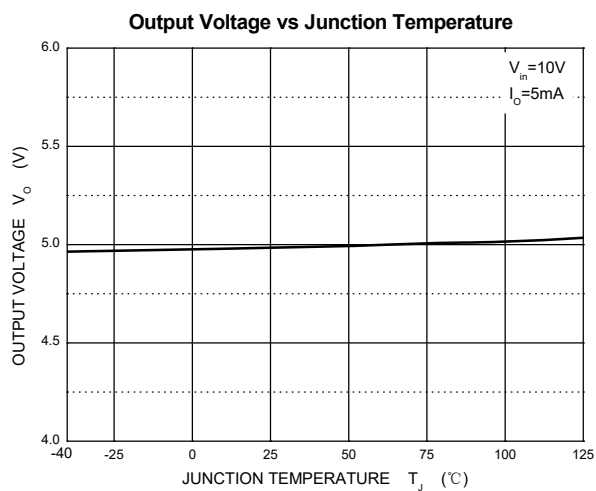
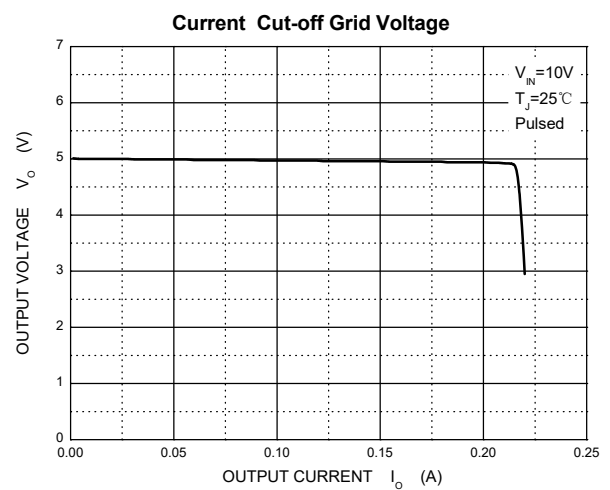
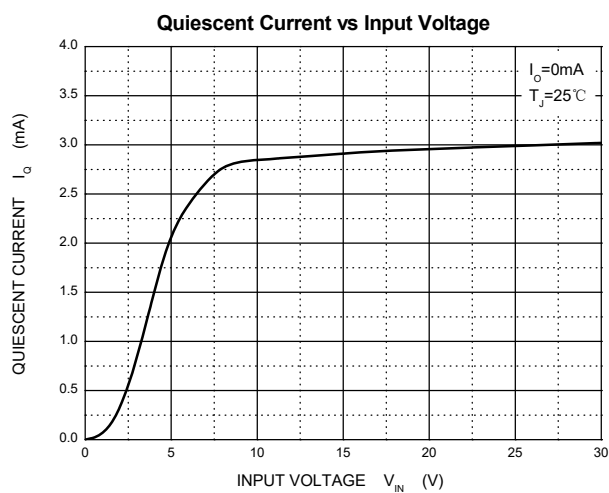
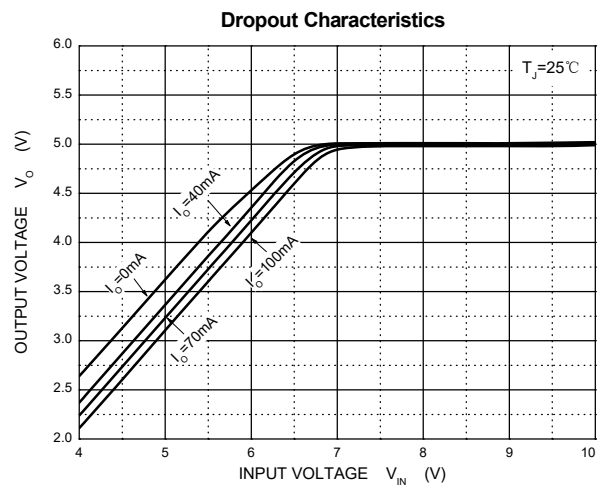
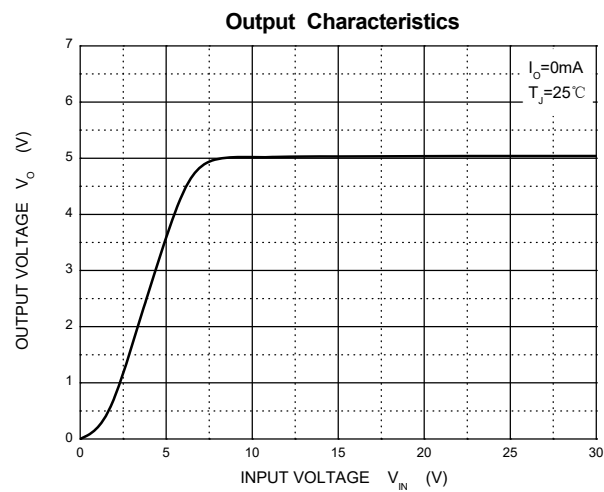
Electrical Characteristics

78L05 ($V_{OUT} = 5.0V$, $V_{IN} = 10V$, $I_{OUT} = 40mA$, $C_{IN} = 0.33\mu F$, $C_{OUT} = 0.1\mu F$, $T_J = 25^\circ C$, unless otherwise specified)

CHARACTERISTIC	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Input voltage	V_{IN}	-	-	-	30	V
Output voltage	V_{OUT}	$T_J = 25^\circ C$	4.85	5.00	5.15	V
		$V_{IN} = 7 \text{ to } 20V$, $I_{OUT} = 1 \text{ to } 40mA$	4.75	5.00	5.25	
		$I_{OUT} = 1 \text{ to } 70mA$	4.75	5.00	5.25	
Output current	I_{OUT}	$T_J = 25^\circ C$	100	-	-	mA
Quiescent current	I_Q	$I_{OUT} = 0mA$	-	3.8	6.0	mA
Quiescent current change	ΔI_Q	$V_{IN} = 8 \text{ to } 20V$	-	-	1.5	mA
		$I_{OUT} = 1 \text{ to } 40mA$	-	-	0.1	mA
Dropout voltage	V_{DO}	$T_J = 25^\circ C$	-	1.7	-	V
Line regulation	ΔV_{LINE}	$V_{IN} = 7 \text{ to } 20V$, $T_J = 25^\circ C$	-	32	150	mV
		$V_{IN} = 8 \text{ to } 20V$, $T_J = 25^\circ C$	-	26	100	
Load regulation	ΔV_{LOAD}	$I_{OUT} = 1 \text{ to } 100mA$, $T_J = 25^\circ C$	-	15	60	mV
		$I_{OUT} = 1 \text{ to } 40mA$, $T_J = 25^\circ C$	-	8	30	
Output noise voltage	V_N	$f = 10 \text{ to } 100kHz$, $T_J = 25^\circ C$	-	42	-	$\mu V/V_{OUT}$
Ripple rejection	RR	$V_{IN} = 8 \text{ to } 20V$, $f = 120Hz$	41	49	-	dB

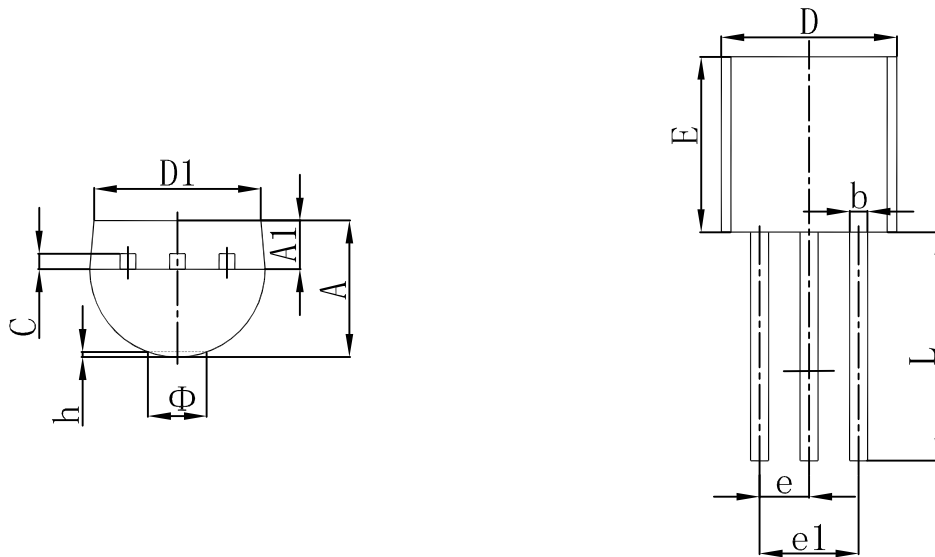


Typical Characteristics





TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015



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