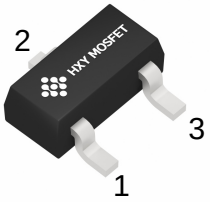
Features

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

Applications

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



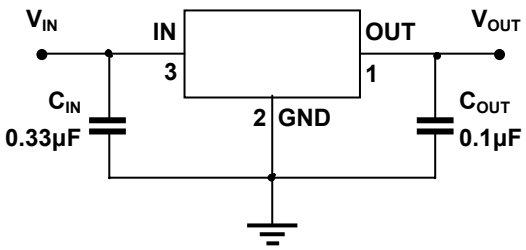
- 1: OUT
- 2: GND
- 3: IN

SOT-23

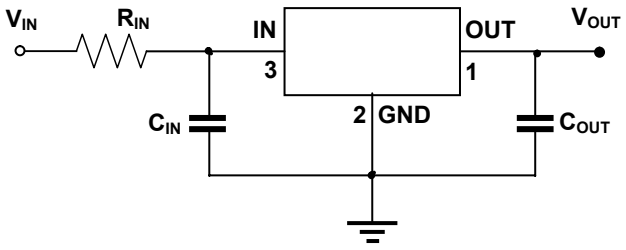
Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
78L05-35	SOT-23	L05	3000

Typical Application Circuit



Conventional Circuit



Resistance are used at IN

Absolute Maximum Rating

Characteristics	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	-

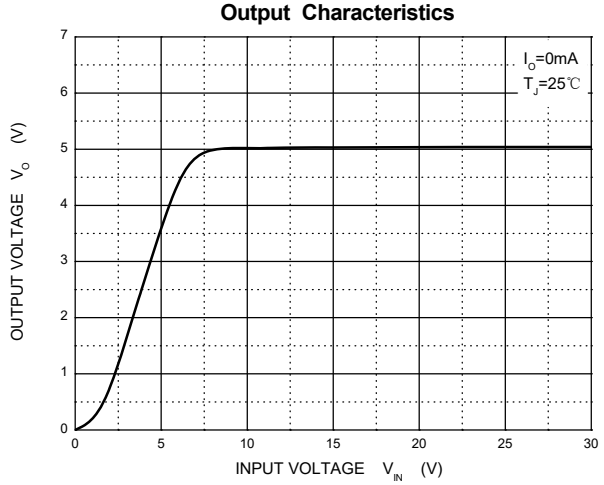
Electrical Characteristics

78L05-35(V_{IN} = 10V, I_{OUT} = 40mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, T_J = 25°C, unless otherwise specified)

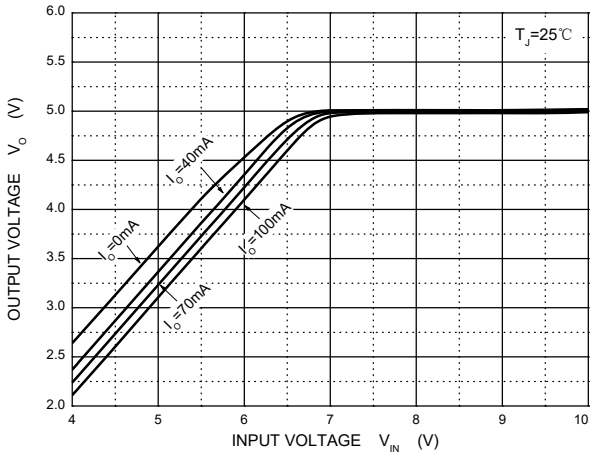
Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Input voltage	V_{IN}	-	-	-	30	V
Output voltage	V_{OUT}	T_J = 25°C	4.85	5.00	5.15	V
		V_{IN} = 7 to 20V, I_{OUT} = 1 to 40mA	4.75	5.00	5.25	
		I_{OUT} = 1 to 70mA	4.75	5.00	5.25	
Output current	I_{OUT}	T_J = 25°C	100	-	-	mA
Quiescent current	I_Q	I_{OUT} = 0mA	-	3.8	6.0	mA
Quiescent current change	ΔI_Q	V_{IN} = 8 to 20V	-	-	1.5	mA
		I_{OUT} = 1 to 40mA	-	-	0.1	mA
Dropout voltage	V_{DO}	T_J = 25°C	-	1.7	-	V
Line regulation	ΔV_{LINE}	V_{IN} = 7 to 20V, T_J = 25°C	-	32	150	mV
		V_{IN} = 8 to 20V, T_J = 25°C	-	26	100	
Load regulation	ΔV_{LOAD}	I_{OUT} = 1 to 100mA, T_J = 25°C	-	15	60	mV
		I_{OUT} = 1 to 40mA, T_J = 25°C	-	8	30	
Output noise voltage	V_N	f = 10 to 100kHz, T_J = 25°C	-	42	-	μV/V_{OUT}
Ripple rejection	RR	V_{IN} = 8 to 20V, f = 120Hz	41	49	-	dB

Typical Characteristics

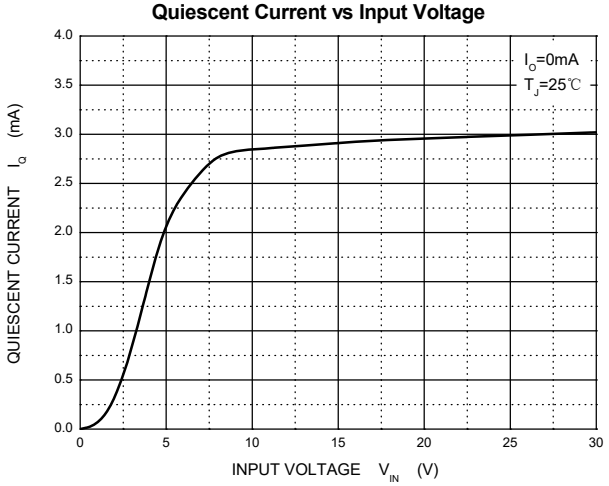
Output Characteristics



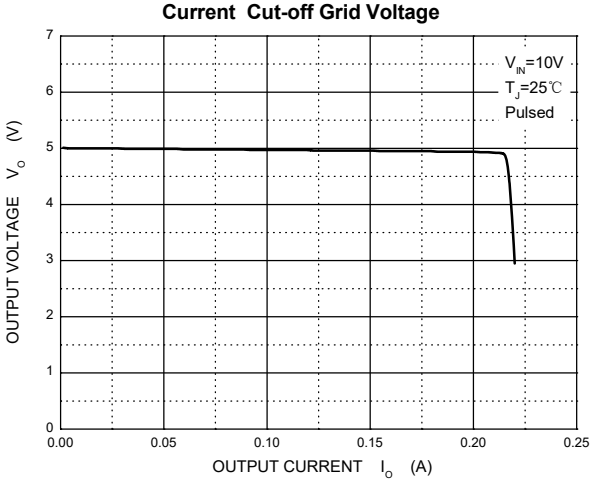
Dropout Characteristics



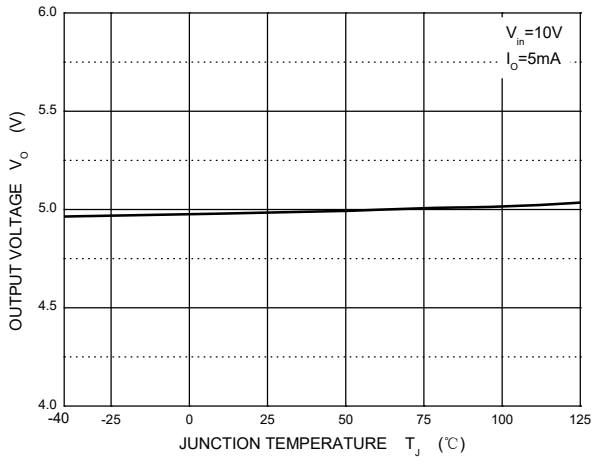
Quiescent Current vs Input Voltage



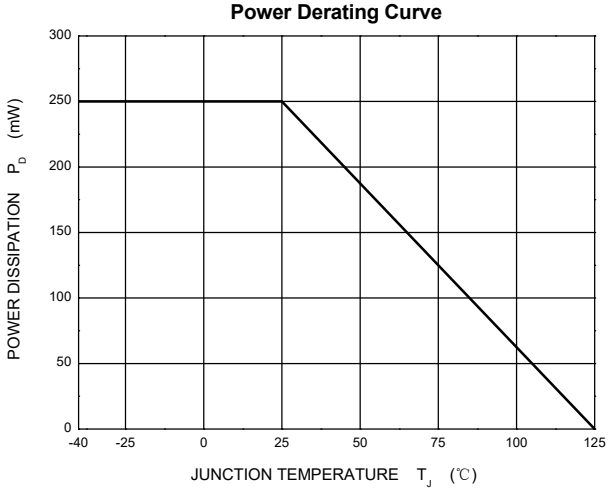
Current Cut-off Grid Voltage



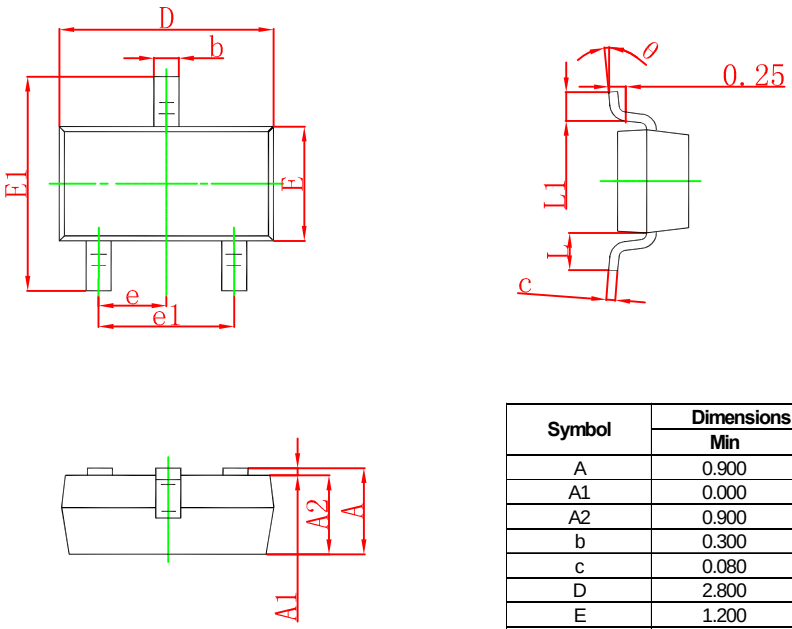
Output Voltage vs Junction Temperature



Power Derating Curve

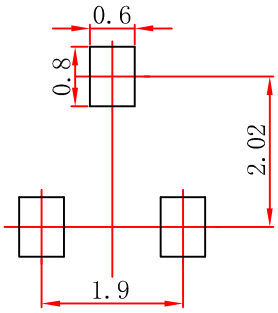


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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