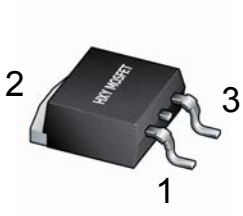
FEATURES

- Available Output Voltage:5.0V
- Maximum Input Voltage: 35V
- Maximum Output Current:
  Exceed 500mA at T_J = 25°C
- Output Tolerances:
  ±3% at T_J = 25°C
  ±5% over the Operating T_J
- No External Components

Applications

- Motor Drives
- On-Card Regulation
- Portable Devices
- Telecommunications
- TVs and Set-top Boxes



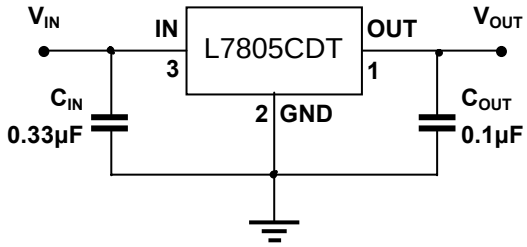
- 1: IN
- 2: GND
- 3: OUT

TO-252-2L

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
L7805CDT	TO-252-2L	78M05	2500

Typical Application Circuit



Conventional Circuit

Absolute Maximum Ratings

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Maximum input voltage	V_{IN}	35	V
Maximum junction temperature	$T_{J\ Max}$	150	°C
Storage temperature	T_{stg}	- 65 ~ 150	°C
Soldering temperature & time	T_{solder}	260°C, 10s	-

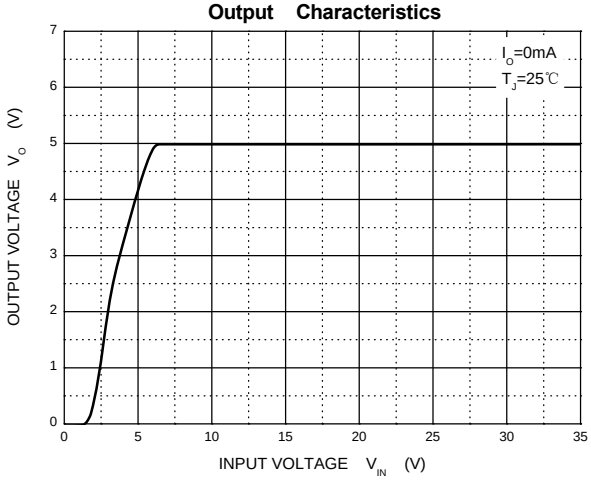
Electrical Characteristics

78M05 (V_{IN} = 10V, I_{OUT} = 350mA, C_{IN} = 0.33μF, C_{OUT} = 0.1μF, T_J = 25°C, unless otherwise specified)

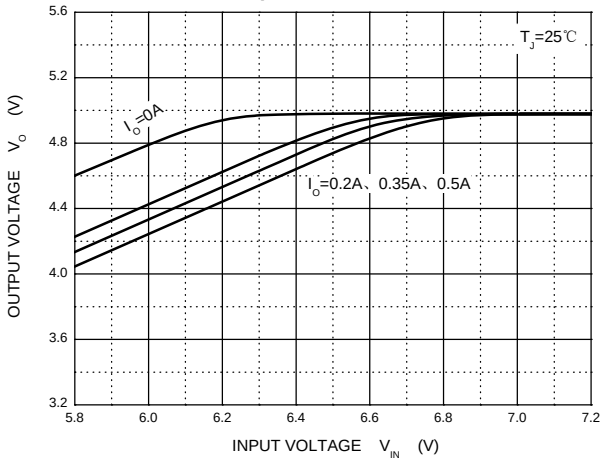
CHARACTERISTIC	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Output voltage	V_{OUT}	-	4.85	5.00	5.15	V
		V_{IN} = 7 to 20V, I_{OUT} = 5 to 350mA	4.75	5.00	5.25	
Line regulation	LNR	V_{IN} = 7 to 25V, I_{OUT} = 200mA	-	3.0	100	mV
		V_{IN} = 8 to 25V, I_{OUT} = 200mA	-	1.0	50	
Load regulation	LDR	I_{OUT} = 5 to 500mA	-	15	100	mV
		I_{OUT} = 5 to 200mA	-	5.0	50	
Quiescent current	I_Q	-	-	4.2	6.0	mA
Quiescent current change	ΔI_Q	V_{IN} = 8 to 25V, I_{OUT} = 200mA	-	-	0.8	mA
		I_{OUT} = 5 to 350mA	-	-	0.5	
Output noise voltage	V_N	f = 10 to 100kHz	-	40	200	μV
Ripple rejection	RR	V_{IN} = 8 to 18V, I_{OUT} = 300mA, f = 120Hz	62	80	-	dB
Dropout voltage	V_D	I_{OUT} = 350mA	-	2.0	2.5	V
Short circuit current	I_{SC}	V_{IN} = 10V, OUT short to GND	-	300	-	mA
Peak current	I_{Peak}	-	-	0.5	-	A

Typical Characteristics

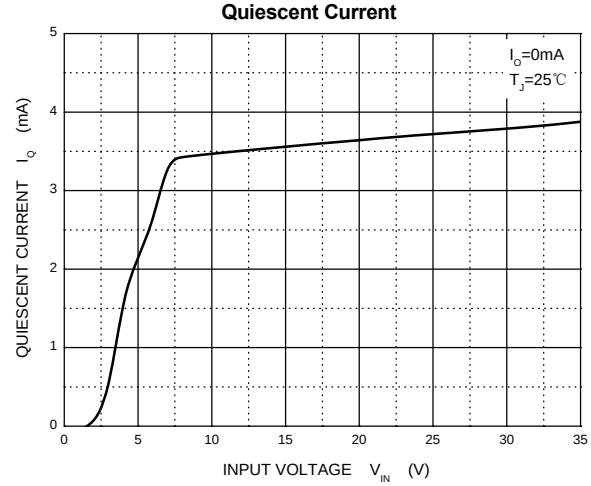
Output Characteristics



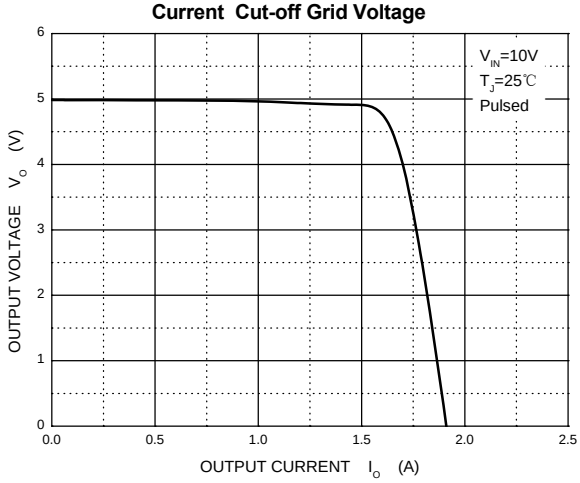
Dropout Characteristics



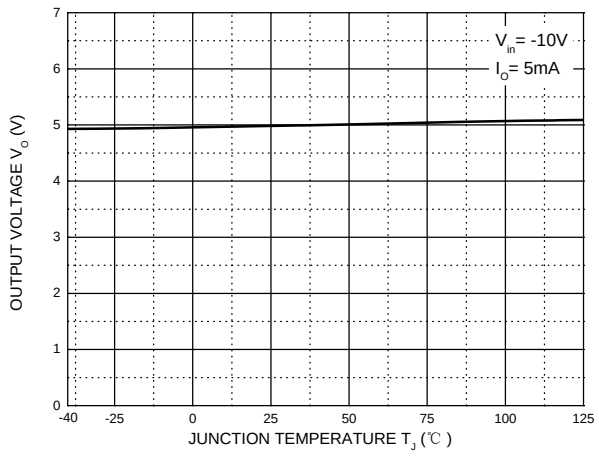
Quiescent Current



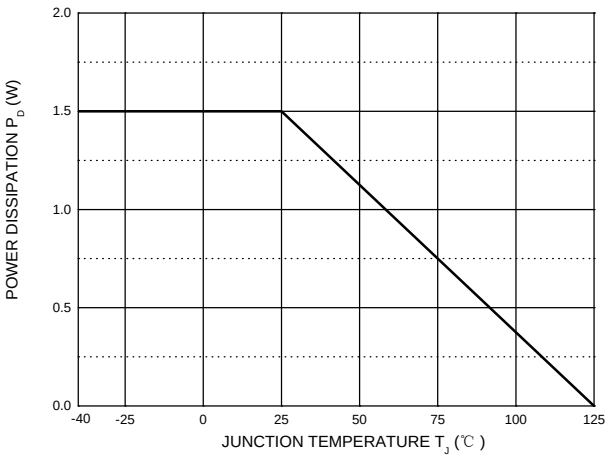
Current Cut-off Grid Voltage



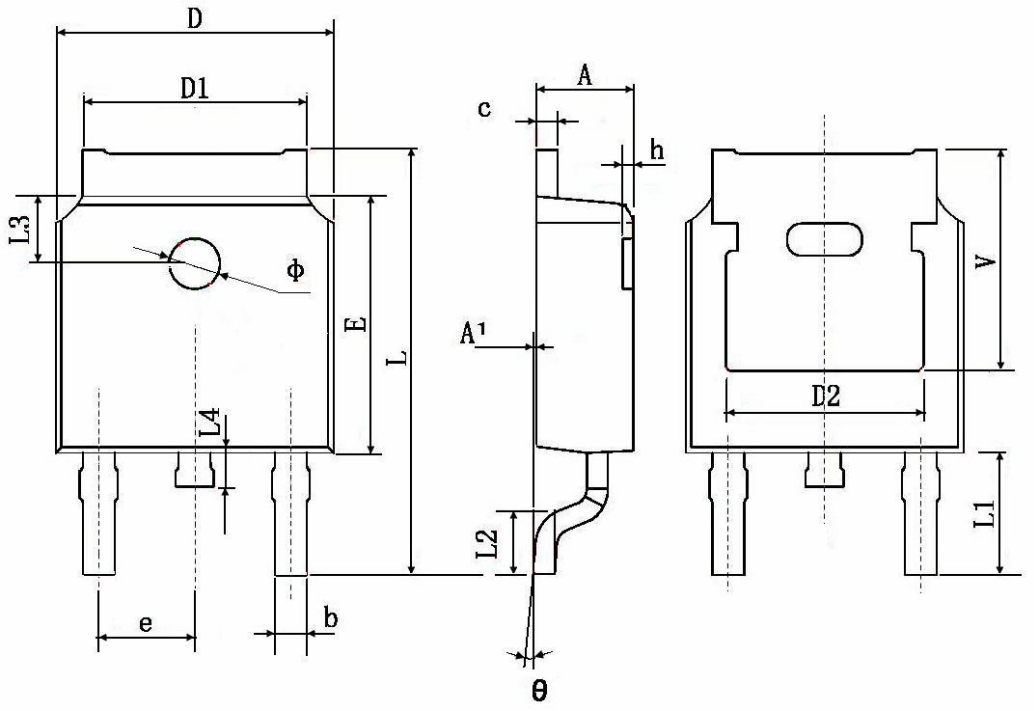
Output Voltage vs Junction Temperature



Power Derating Curve



TO-252-2L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.660	0.860	0.026	0.034
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	0.483 TYP.		0.190 TYP.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 TYP.		0.114 TYP.	
L2	1.400	1.700	0.055	0.067
L3	1.600 TYP.		0.063 TYP.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.350 TYP.		0.211 TYP.	

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