

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



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MOV



GDT



PLED

## L7805CD2T(MS)

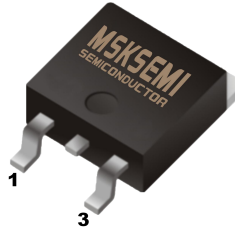

Product specification

**Three-terminal positive voltage regulator**

**FEATURES**

- Maximum Output current IOM : 1.5 A
- Output voltage Vo: 5V
- Continuous total dissipation  
 $P_D: 1.5\text{ W (}T_a = 25\text{ }^\circ\text{C)}$   
 $15\text{ W (}T_c = 25\text{ }^\circ\text{C)}$

**Reference News**

PACKAGE OUTLINE	Marking
 <p>1.IN 2.GND 3.OUT</p>	 <p><b>MSKSEMI</b> <b>L7805CD2T</b> <b>CHN MS**</b></p>

**ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)**

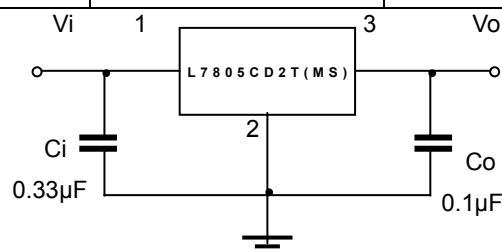
Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	8.33	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_{OPR}$	0~+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~+150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE**

( $V_i=10\text{V}, I_o=500\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$ , unless otherwise specified )

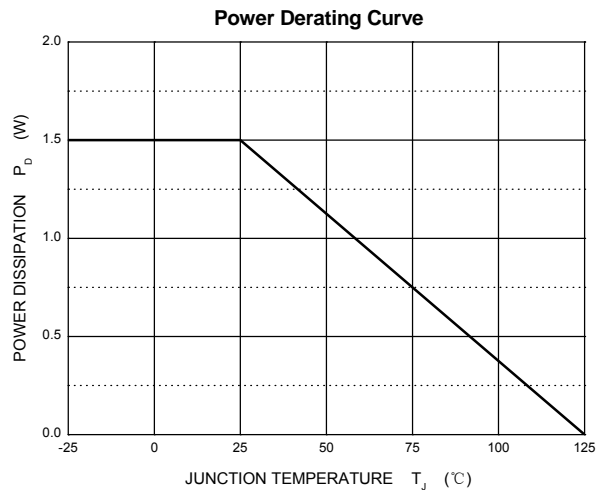
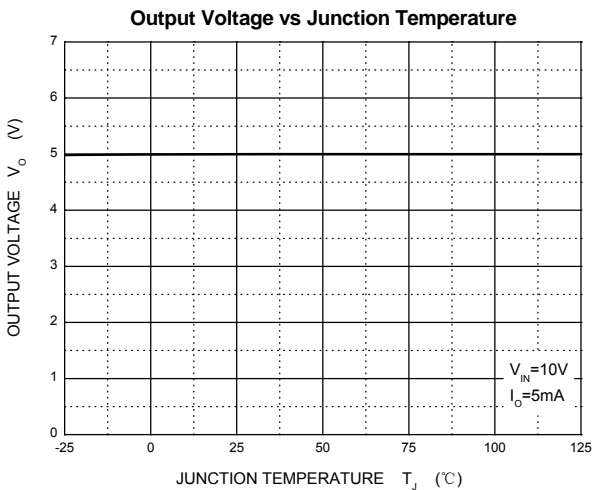
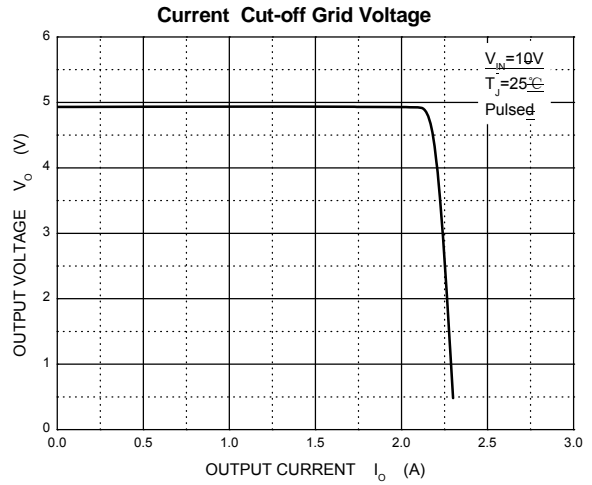
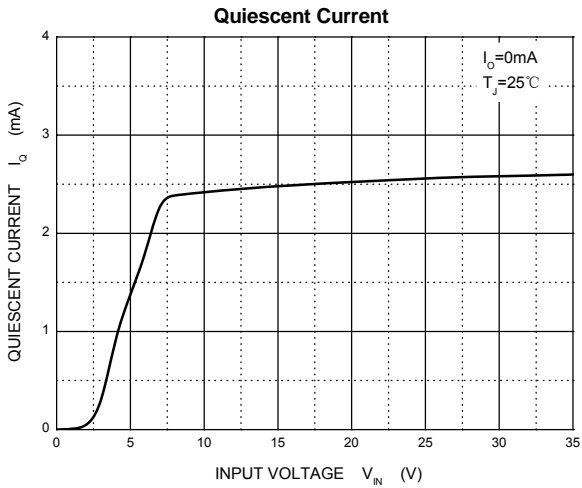
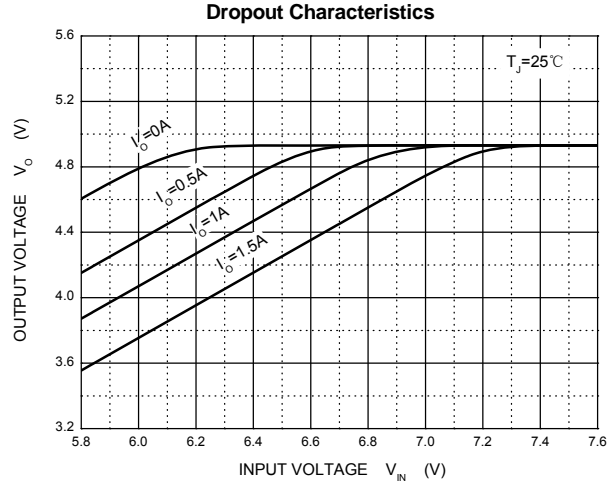
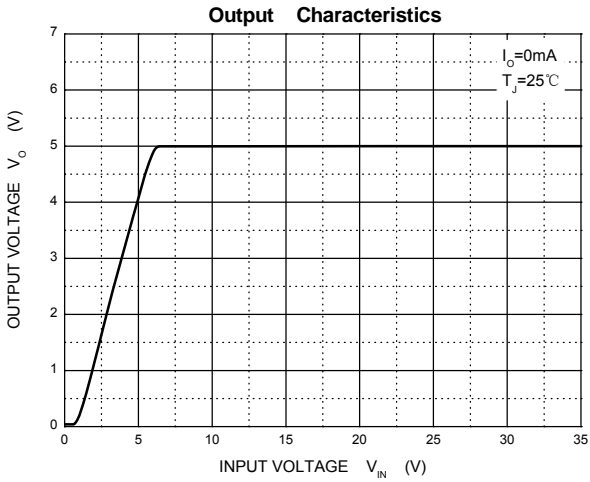
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	$V_o$	$25^\circ\text{C}$	4.8	5.0	5.2	V
		$7\text{V} \leq V_i \leq 20\text{V}, I_o=5\text{mA}-1\text{A}, P \leq 15\text{W}$ $0-125^\circ\text{C}$	4.75	5.00	5.25	V
Load Regulation	$\Delta V_o$	$I_o=5\text{mA}-1.5\text{A}$ $25^\circ\text{C}$		9	100	mV
		$I_o=250\text{mA}-750\text{mA}$ $25^\circ\text{C}$		4	50	mV
Line regulation	$\Delta V_o$	$7\text{V} \leq V_i \leq 25\text{V}$ $25^\circ\text{C}$		4	100	mV
		$8\text{V} \leq V_i \leq 12\text{V}$ $25^\circ\text{C}$		1.6	50	mV
Quiescent Current	$I_q$	$25^\circ\text{C}$		5	8	mA
Quiescent Current Change	$\Delta I_q$	$7\text{V} \leq V_i \leq 25\text{V}$ $0-125^\circ\text{C}$		0.3	1.3	mA
		$5\text{mA} \leq I_o \leq 1\text{A}$ $0-125^\circ\text{C}$		0.03	0.5	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$ $25^\circ\text{C}$		42		$\mu\text{V}$
Output voltage drift	$\Delta V_o / \Delta T$	$I_o=5\text{mA}$ $0-125^\circ\text{C}$		-1.1		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$8\text{V} \leq V_i \leq 18\text{V}, f=120\text{Hz}$ $0-125^\circ\text{C}$	62	73		dB
Dropout Voltage	$V_d$	$I_o=1\text{A}$ $25^\circ\text{C}$		2		V
Output resistance	$R_o$	$f=1\text{KHz}$ $0-125^\circ\text{C}$		10		$\text{m}\Omega$
Short Circuit Current	$I_{sc}$	$25^\circ\text{C}$		230		mA
Peak Current	$I_{pk}$	$25^\circ\text{C}$		2.2		A

**TYPICAL APPLICATION**

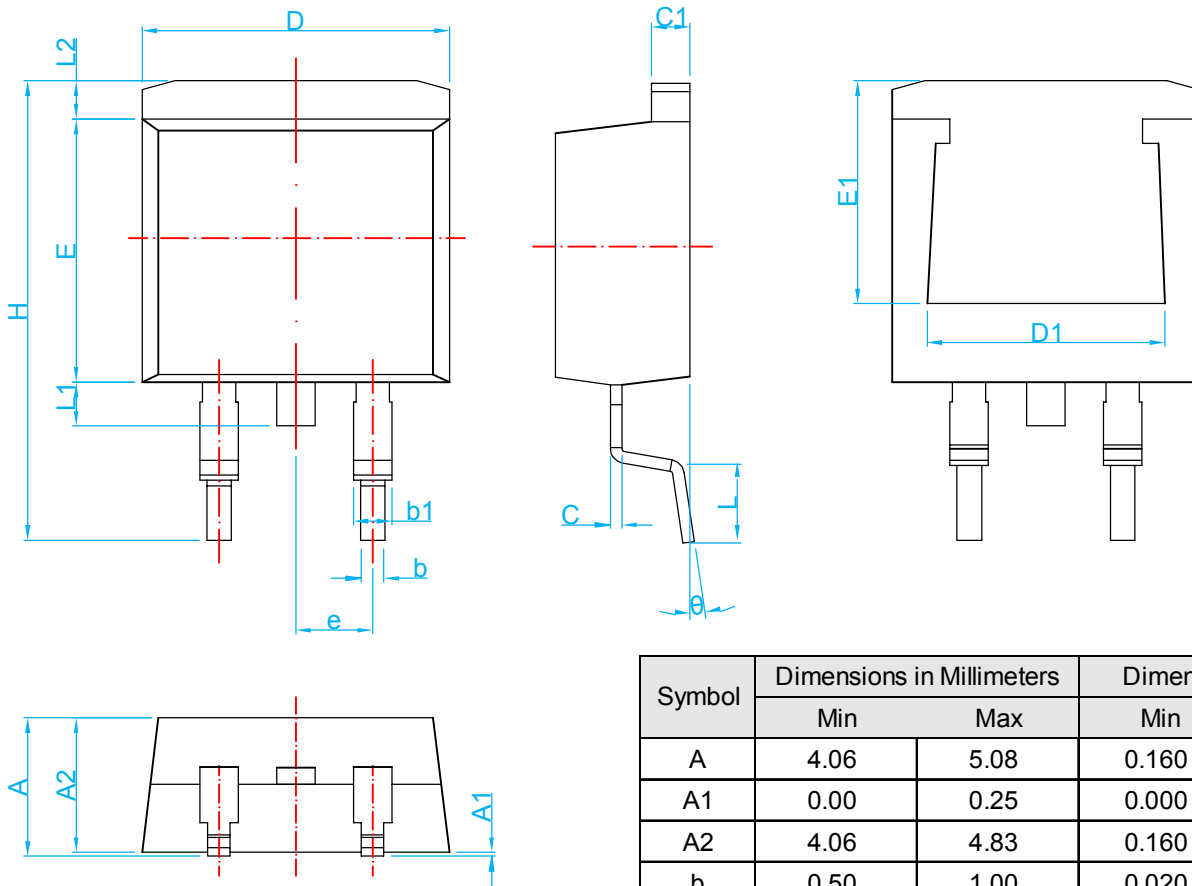


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

**Typical Characteristics**



**Package Outline Dimensions**



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	4.06	5.08	0.160	0.200
A1	0.00	0.25	0.000	0.010
A2	4.06	4.83	0.160	0.190
b	0.50	1.00	0.020	0.039
b1	1.14	1.78	0.045	0.070
C	0.33	0.74	0.013	0.029
C1	1.14	1.67	0.045	0.066
D	9.65	10.67	0.380	0.420
D1	6.23	---	0.245	---
E	8.38	9.66	0.330	0.380
E1	6.86	---	0.270	---
H	14.60	15.88	0.575	0.625
e	2.54 TYP		0.100 TYP	
L	1.78	2.84	0.070	0.112
L1	1.20	1.78	0.047	0.070
L2	1.17	1.68	0.046	0.066
theta	0°	8°	0°	8°

**REEL SPECIFICATION**

P/N	PKG	QTY
L7805CD2T(MS)	TO-263	1000

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