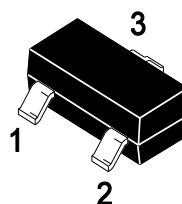


Features

- Input voltage: up to 30V
- Output Voltage: 5V
- Output current up to 100 mA, internal thermal overload protection and short-circuit limiting.
- Continuous total dissipation P_D : Internal limited

SOT-23



1. OUT 2.IN 3. GND

Maximum Ratings

Ratings at $T_A = 25^\circ\text{C}$ ambient temperature unless otherwise specified.

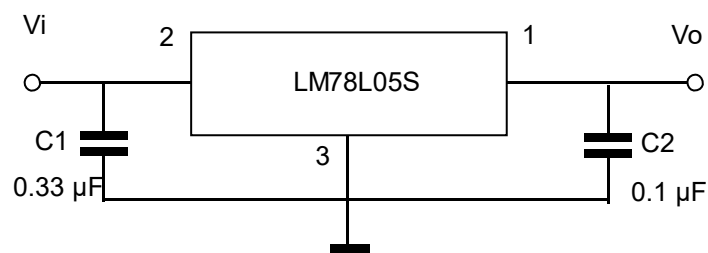
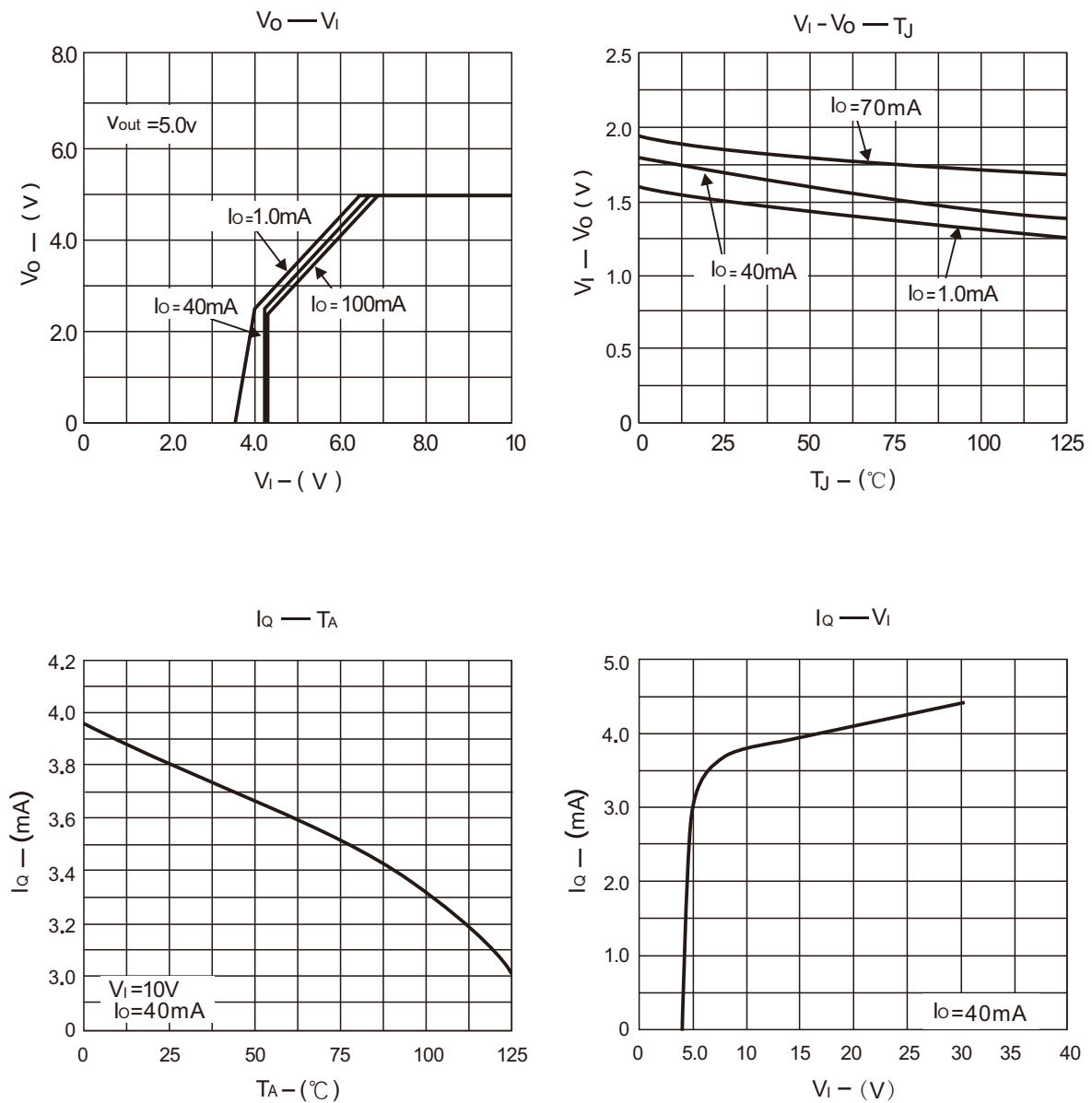
Parameter	Symbols	Value	Units
Input Voltage	V_I	30	V
Output Current	I_O	100	mA
Operating Virtual Junction Temperature	T_J	0~125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~150	$^\circ\text{C}$

Electrical Characteristics

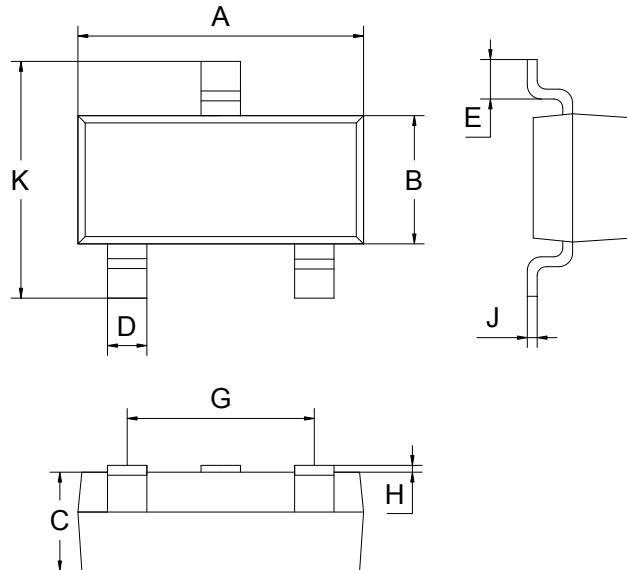
Ratings at $T_A = 25^\circ\text{C}$ ambient temperature unless otherwise specified.

Parameter	Symbols	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	$I_O=40\text{mA}$ $T_J=25^\circ\text{C}$	4.80	5.0	5.2	V
		$I_O=1\text{mA to }40\text{mA}$ $V_I=7\text{V to }20\text{V}$	4.75	5.0	5.25	V
		$I_O=1\text{mA to }70\text{mA}$ $V_I=10\text{V}$	4.75	5.0	5.25	V
Input Regulation	ΔV_O	$V_I=7\text{V to }20\text{V}$ $T_J=25^\circ\text{C}$		32	150	mV
		$V_I=8\text{V to }20\text{V}$ $T_J=25^\circ\text{C}$		26	100	mV
Output Regulation	ΔV_O	$I_O=1\text{mA to }100\text{mA}$ $T_J=25^\circ\text{C}$		15	60	mV
		$I_O=1\text{mA to }40\text{mA}$ $T_J=25^\circ\text{C}$		8	30	mV
Ripple Rejection	RR	$V_I=8\text{V to }18\text{V}$ $f=120\text{Hz}$ $T_J=25^\circ\text{C}$	41	49		dB
Output Noise Voltage	eN	$f=10\text{Hz}\sim 100\text{KHz}$ $T_J=25^\circ\text{C}$		42		μV
Dropout Voltage	V_D	$T_J=25^\circ\text{C}$		1.7		V
Quiescent Current	I_Q	$T_J=25^\circ\text{C}$		3.8	6	mA
		$T_J=125^\circ\text{C}$			5.5	mA
Quiescent Current Change	ΔI_Q	$V_I=8\text{V to }20\text{V}$			1.5	mA
		$I_O=1\text{mA to }40\text{mA}$			0.1	mA

Ratings and Characteristic Curves

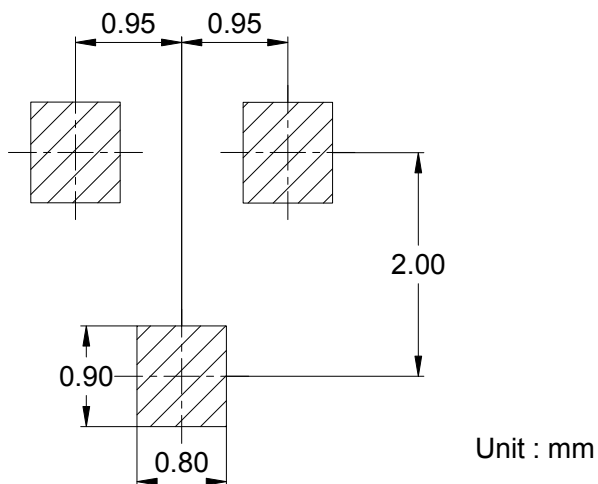


SOT-23 Package Outline Dimensions



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOT-23 Suggested Pad Layout



Package Information

TYPE	REEL	Reel Size	Box	Carton
LM78L05S	3000 pcs	7 Inch	45,000 pcs	180,000 pcs