

RoHS Compliant Product
A suffix of "-C" specifies halogen or lead -free

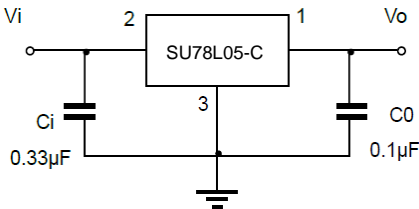
FEATURES

- Maximum Output Current I_o : 0.1A
- Output Voltage V_o : 5V
- Continuous Total Dissipation P_D : 0.25W @ $T_A=25^\circ\text{C}$

MARKING



TYPICAL APPLICATION



PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

ORDER INFORMATION

Part Number	Type
SU78L05-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS ($T_J=25^\circ\text{C}$ unless otherwise specified)

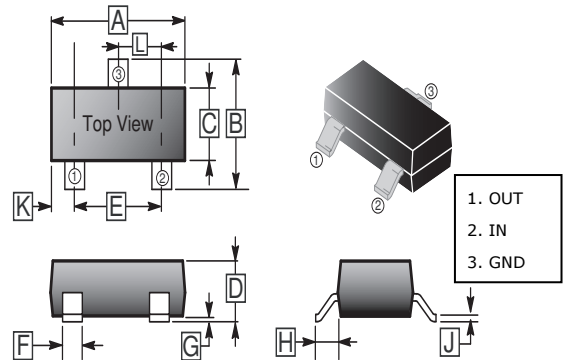
Parameter	Symbol	Ratings	Unit
Input Voltage	V_{IN}	30	V
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	160	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	-40~125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~150	

ELECTRICAL CHARACTERISTICS ($V_i=10\text{V}$, $I_o=40\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, $T_J=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Output Voltage	V_o	4.75	5	5.25	V	$7\text{V} \leq V_{IN} \leq 20\text{V}$, $I_o=1\text{mA} \sim 40\text{mA}$, $T_J=0 \sim 125^\circ\text{C}$
		4.75	5	5.25		$I_o=1\text{mA} \sim 70\text{mA}$, $T_J=0 \sim 125^\circ\text{C}$
Line Regulation	ΔV_o	-	32	150	mV	$7\text{V} \leq V_{IN} \leq 20\text{V}$
		-	26	100		$8\text{V} \leq V_{IN} \leq 20\text{V}$
Load Regulation	ΔV_o	-	15	60	mV	$I_o=1\text{mA} \sim 100\text{mA}$
		-	8	30		$I_o=1\text{mA} \sim 40\text{mA}$
Quiescent Current	I_q	-	3.8	6	mA	
Quiescent Current Change	ΔI_q	-	-	1.5	mA	$8\text{V} \leq V_{IN} \leq 20\text{V}$, $T_J=0 \sim 125^\circ\text{C}$
		-	-	0.1		$1\text{mA} \leq V_{IN} \leq 40\text{mA}$, $T_J=0 \sim 125^\circ\text{C}$
Output Noise Voltage	V_N	-	42	-	μV	$10\text{Hz} \leq f \leq 100\text{kHz}$
Ripple Rejection	RR	41	49	-	dB	$8\text{V} \leq V_{IN} \leq 20\text{V}$, $f=120\text{Hz}$, $T_J=0 \sim 125^\circ\text{C}$
Dropout Voltage	V_D	-	1.7	-	V	

Note:
1. Pulse test.

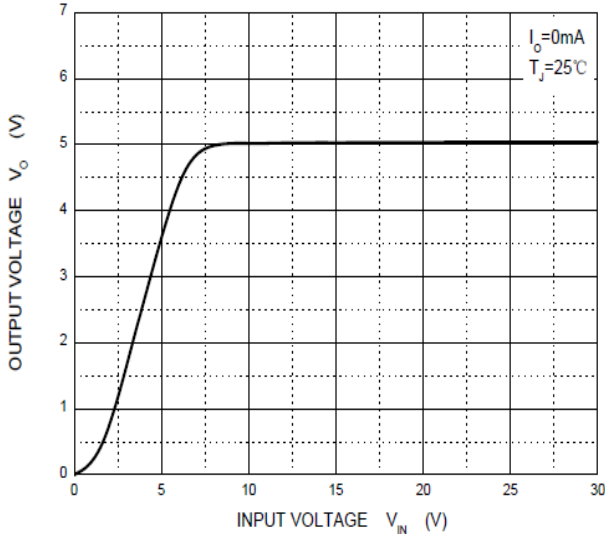
SOT-23



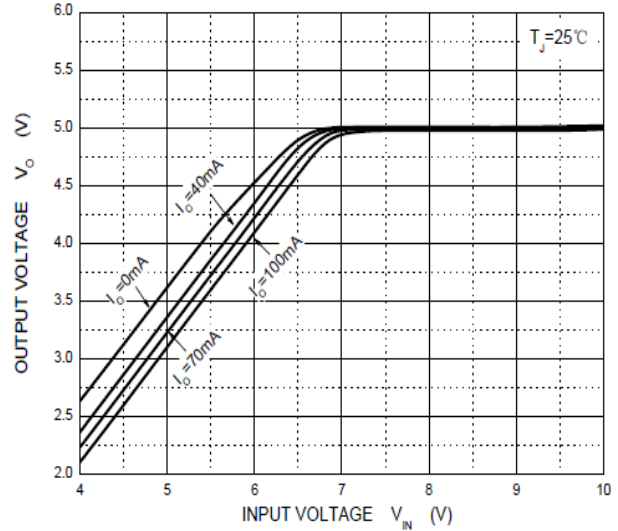
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.18
B	2.10	3.00	H	0.55	REF.
C	1.20	1.80	J	0.08	0.26
D	0.89	1.30	K	0.60	REF.
E	1.70	2.30	L	0.95	BSC.
F	0.30	0.50			

CHARACTERISTICS CURVE

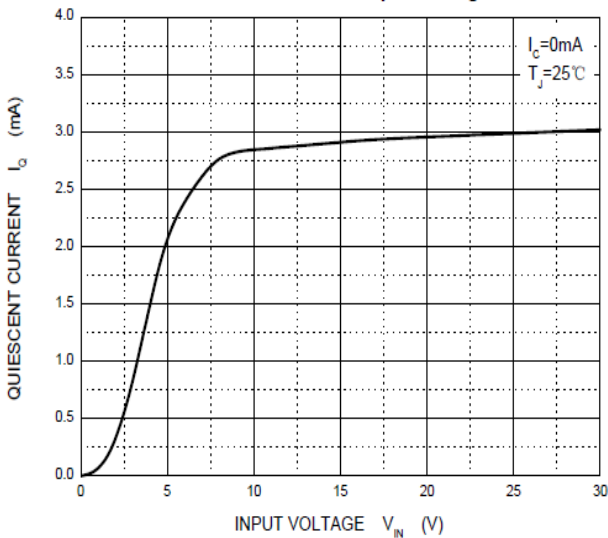
Output Characteristics



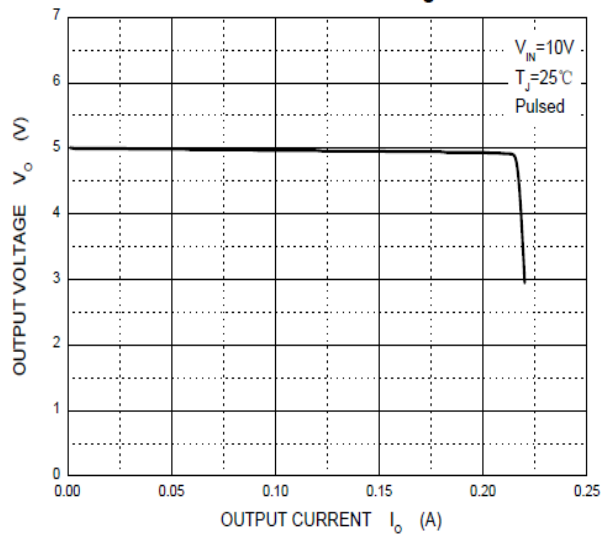
Dropout Characteristics



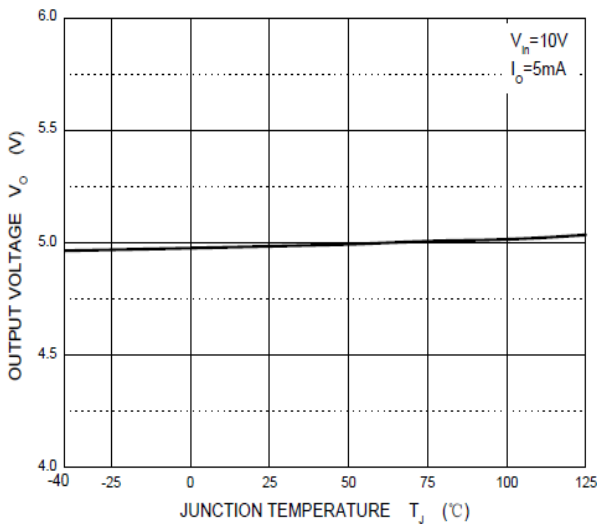
Quiescent Current vs Input Voltage



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve

