Elektronische Bauelemente

SJ78L05

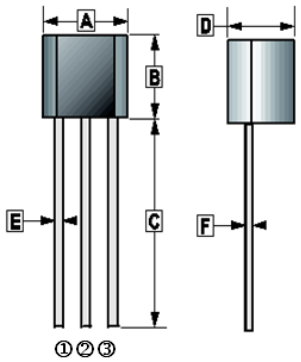
3-Terminal
Positive Voltage Regulator

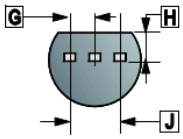
RoHS Compliant Product
A suffix of "-C" specifies halogen and lead-free

FEATURES

- Maximum Output Current I_O: 0.1A
- Output Voltage V_O: 15V
- Continuous Total Dissipation P_D: 0.625W @T_A=25°C

TO-92

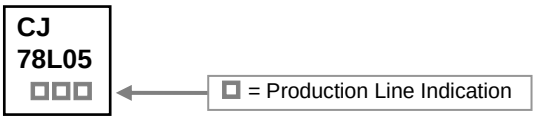




1. OUT
2. GND
3. IN

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.30	4.70	F	0.30	0.51
B	4.30	4.70	G	1.27 TYP.	
C	12.70	14.5	H	1.10	1.40
D	3.30	3.81	J	2.42	2.66
E	0.36	0.56			

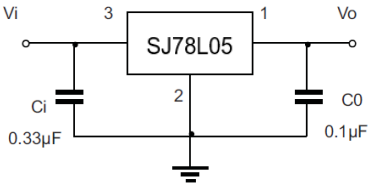
MARKING



ORDER INFORMATION

Part Number	Type
SJ78L05	Lead (Pb)-free
SJ78L05-C	Lead (Pb)-free and Halogen-free

TYPICAL APPLICATION



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

Parameter	Symbol	Ratings	Unit
Input Voltage	V_{IN}	35	V
Thermal Resistance, Junction-Ambient	$R_{\theta JA}$	166.7	°C/W
Operating Junction Temperature Range	T_J	-40~125	°C
Storage Temperature Range	T_{STG}	-65~150	

ELECTRICAL CHARACTERISTICS (V_I=23V, I_O=40mA, C_I=0.33μF, C_O=0.1μF, T_J=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Output Voltage	V_O	14.55	15	15.45	V	T_J=25°C
		14.25	15	15.75		17.5V≤V_{IN}≤30V, I_O=1mA~40mA
		14.25	15	15.75		V_I=23V, I_O=1mA-70mA
Load Regulation	$\triangle V_O$	-	25	150	mV	I_O=1mA~100mA, V_I=23V, T_J=25°C
		-	15	75		I_O=1mA~40mA, V_I=23V, T_J=25°C
Line Regulation	$\triangle V_O$	-	65	300	mV	17.5V≤V_{IN}≤30V, I_O=40mA, T_J=25°C
		-	58	250		19V≤V_{IN}≤30V, I_O=40mA, T_J=25°C
Quiescent Current	I_Q	-	4.6	6.5	mA	T_J=25°C
Quiescent Current Change	$\triangle I_Q$	-	-	1.5	mA	19V≤V_{IN}≤30V, I_O=40mA
		-	-	0.1		1mA≤I_O≤40mA, V_I=23V
Output Noise Voltage	V_N	-	82	-	μV/V_O	10Hz≤f≤100KHz, T_J=25°C
Ripple Rejection	RR	34	39	-	dB	18.5V≤V_{IN}≤28.5V, f=120Hz
Dropout Voltage	V_D	-	1.7	-	V	T_J=25°C

Note:
1. Pulse test.

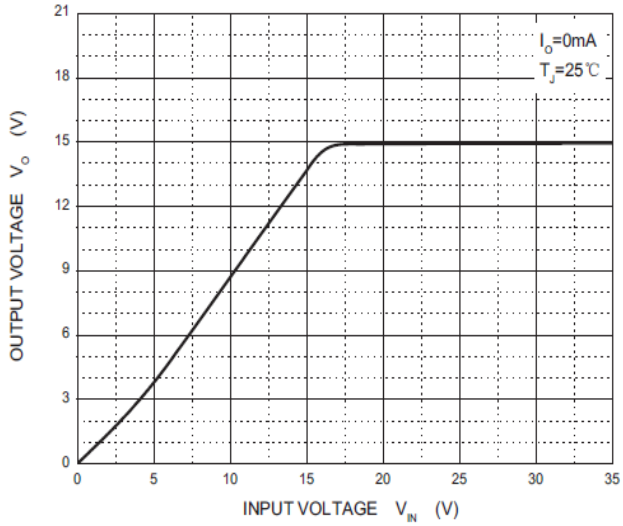
Elektronische Bauelemente

SJ78L05

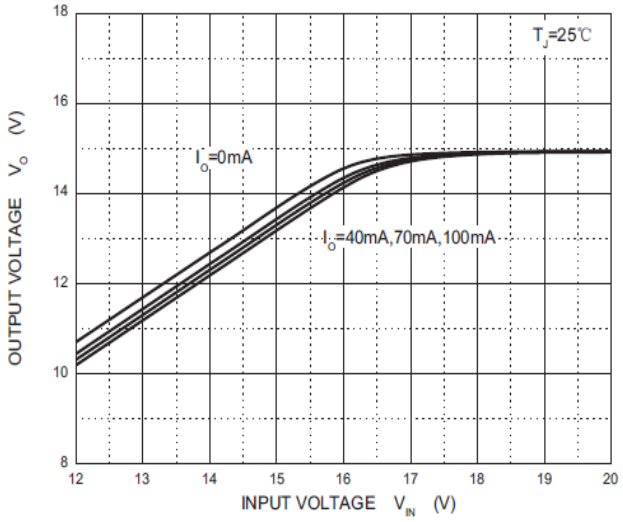
3-Terminal
Positive Voltage Regulator

CHARACTERISTICS CURVE

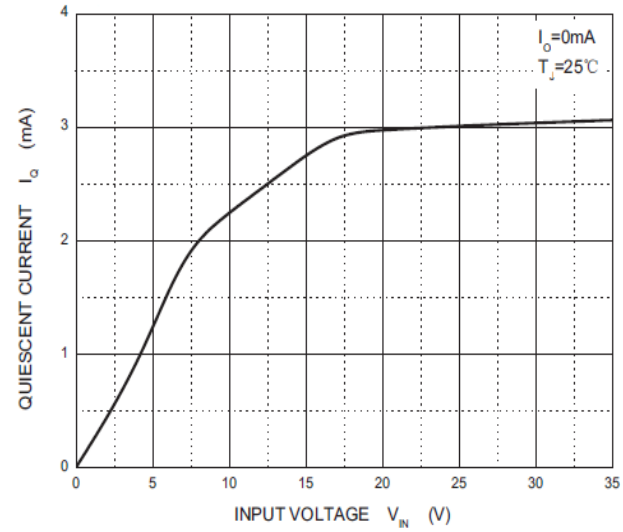
Output Characteristics



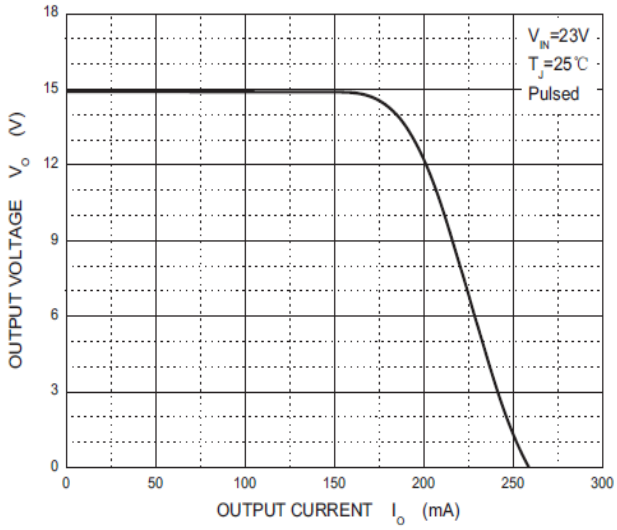
Dropout Characteristics



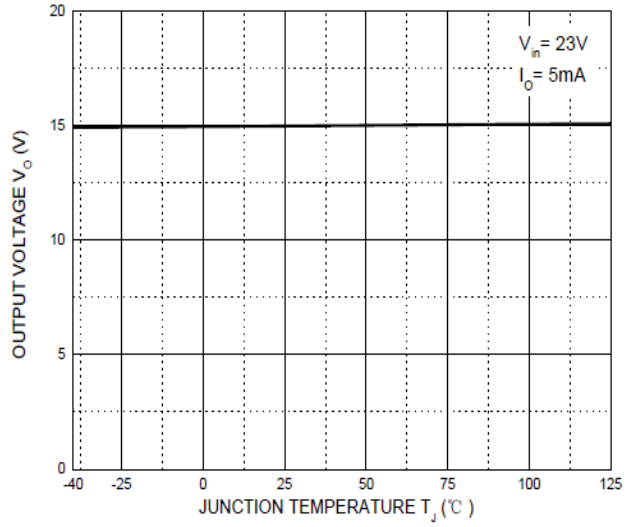
Quiescent Current vs Input Voltage



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve