78L05ACZ - 78L12ACZ

Positive Voltage Regulators

GENERAL DESCRIPTION

This series of fixed-voltage integrated-circuit voltage regulators is designed for a wide range of applications. These applications include on-card regulation for elimination of noise and distribution problems associated with single-point regulation. Each of these regulators can deliver up to 100 mA of output current. The internal limiting and thermal-shutdown features of these regulators them essentially immune to overload.
Compliance to RoHS.

FEATURES

- 3-Terminal Regulators
- Output Current up to 100 mA
- No External Components
- Short circuit Protection
- Internal Thermal-Overload Protection
- With TO92 package

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_I	Input Voltage DC	V_o = 5 V	30	V
		V_o = 12 V	35	
I_o	Output Current		100	mA
P_D	Power Dissipation		Internally Limited	
T_{OP}	Operating Junction Temperature		0° to 125	°C
T_{STG}	Storage Temperature		-40° to 150	°C

THERMAL DATA

Symbol	Ratings	Value	Unit
R_{thJA}	From Junction to Free-Air Thermal Resistance	200	°C/W

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ELECTRICAL CHARACTERISTICS OF 78L05ACZ

V_i- = 10 V; I_O = 40 mA; T_C = 25°C

Symbol	Ratings	Test Condition(s)	MIN	TYP	MAX	UNIT
V_O	Output Voltage	T_C = 25°C	4.8	5	5.2	V
		V_i = 7 V to 20 V I_O = 1 mA to 40 mA	4.75	5	5.25	
		I_O = 1 mA to 70 mA	4.75	5	5.25	
ΔV_O	Line Regulation	7 V ≤ V_i ≤ 20 V	-	-	150	mV
		8 V ≤ V_i ≤ 20 V	-	-	100	
ΔV_O	Load Regulation	I_O = 1 mA to 100 mA	-	-	60	mV
		I_O = 1 mA to 40 mA	-	-	30	
I_B	Quiescent Current		-	-	6	mA
ΔI_{B1}	Quiescent Current Change	8 V ≤ V_i ≤ 20 V	-	-	1.5	mA
ΔI_{B2}	Quiescent Current Change	I_O = 1 mA to 40 mA	-	-	0.1	mA

ELECTRICAL CHARACTERISTICS OF 78L12ACZ

V_i- = 19 V; I_O = 40 mA; T_C = 25°C

Symbol	Ratings	Test Condition(s)	MIN	TYP	MAX	UNIT
V_O	Output Voltage	T_C = 25°C	11.5	12	12.5	V
		V_i = 14.5 V to 27 V I_O = 1 mA to 40 mA	11.4	12	12.6	
		I_O = 1 mA to 70 mA	11.4	12	12.6	
ΔV_O	Line Regulation	14.7 V ≤ V_i ≤ 27 V	-	-	250	mV
		16 V ≤ V_i ≤ 27 V	-	-	200	
ΔV_O	Load Regulation	1 mA ≤ I_O ≤ 100 mA	-	-	100	mV
		1 mA ≤ I_O ≤ 40 mA	-	-	50	
I_B	Quiescent Current		-	-	6.5	mA
ΔI_{B1}	Quiescent Current Change	16 V ≤ V_i ≤ 27 V	-	-	1.5	mA
ΔI_{B2}	Quiescent Current Change	1 mA ≤ I_O ≤ 40 mA	-	-	0.1	mA

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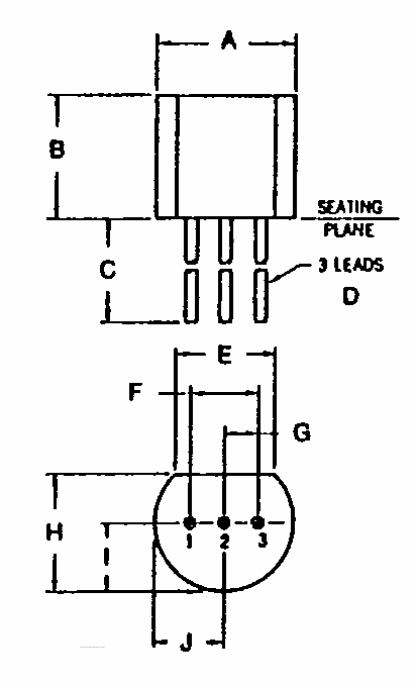
MECHANICAL DATA CASE TO92 REGULATOR

Pin 1 :	Input
Pin 2 :	GND
Pin 3 :	Output

DIMENSIONS		
mm	Min	Max
A	4,45	4,95
B	4,32	4,95
C	12,70	15,49
D	0,41	0,56
E	3,43	3,43
F	2,41	2,67
G	1,14	1,40
H	3,30	3,94
I	2,38	2,42
J	2,38	2,42



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