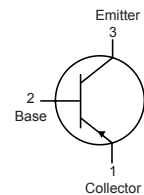
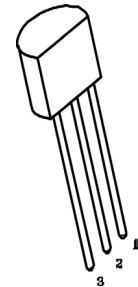


RoHS
Compliant



Features:

- No External Components Required
- Internal Short-Circuit Current Limiting
- Internal Thermal Overload Protection

Description:

A negative 3-terminal voltage regulator in a TO-92 type package suitable for numerous applications requiring up to 100mA. This device features thermal shutdown and current limiting making the device remarkably rugged. In most applications, no external components are required for operation.

A useful for on-card regulation or any other application where a regulated negative voltage at a modest current level is needed. This device offers a substantial advantage over the common resistor/zener diode approach.

Maximum Ratings:

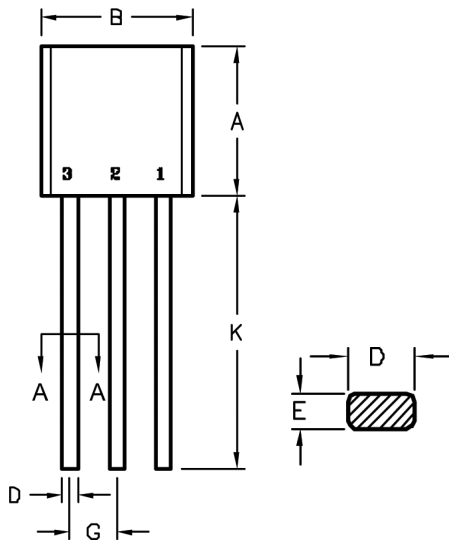
Characteristic	Symbol	Rating	Unit
Input Voltage	V_{IN}	40	V
Internal Power Dissipation (Note 1)	P_D	-	-
Internally Operating Junction Temperature Range	T_{opr}	-0 to +70	°C
Max. Junction Temperature	T_J	+125	
Storage Temperature Range	T_{stg}	-55 to +150	
Lead Temperature (During Soldering, 10sec)	T_L	+300	

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ Unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O	$T_J = +25^\circ\text{C}$	23	24	25	V
		$1\text{mA} \leq I_O \leq 100\text{mA}, 27\text{V} \leq V_{IN} \leq 38\text{V}$	22.8		25.2	
Line Regulation	Reg_{line}	$T_J = +25^\circ\text{C}, 27\text{V} \leq V_{IN} \leq 38\text{V}$	-	-	350	mA
Load Regulation	Reg_{load}	$T_J = +25^\circ\text{C}, 1\text{mA} \leq I_O \leq 100\text{mA}$			200	
Quiescent Current	I_B	$T_J = +125^\circ\text{C}$			6	
Quiescent Current Change	I_B	With line, $28\text{V} \leq V_{IN} \leq 38\text{V}$			1.5	
		With load, $1\text{mA} \leq I_O \leq 40\text{mA}$			0.1	
Output Noise Voltage	V_N	$T_J = +25^\circ\text{C}, f = 10\text{Hz to } 10\text{kHz}$		200		μA
Ripple Rejection	RR	$29\text{V} \leq V_{IN} \leq 35\text{V}, f = 120\text{Hz}$	31	47	-	dB
Drop Out Voltage	V_{DO}	$T_J = +25^\circ\text{C}, I_C = 40\text{mA}$	-	1.7		V

Notes:

1. Thermal resistance, junction-to-ambient is 180°C/W when mounted with 0.4" leads on a P.C. board and $+160^\circ\text{C/W}$ when mounted with 0.25" leads on a P.C. board
2. To ensure constant junction temperature, low duty cycle pulse testing is used.



Dimensions	A	B	C	D	E	F	G	H	K
Min.	4.32	4.45	3.18	0.41	0.35	5°	1.14	1.14	12.7
Max.	5.33	5.2	4.19	0.55	0.5		1.4	1.53	-

Dimensions : Millimetres

Pin Configuration:

1. Collector
2. Base
3. Emitter

Part Number Table

Description	Part Number
Transistor, PNP, 0.6A, 150V, TO-92	2N5401

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