



## PNP MJ2500 – MJ2501

### COMPLEMENTARY POWER DARLINGTONS

The MJ2500, and MJ2501 are silicon epitaxial-base PNP power transistors in monolithic Darlington configuration and are mounted in Jedec TO-3 metal case. They are intended for use in power linear and switching applications.

The complementary NPN types are the MJ3000 and MJ3001 respectively

Compliance to RoHS

### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
$V_{CBO}$	Collector-Base Voltage	$I_E=0$	MJ2500	-60	V
			MJ2501	-80	
$V_{CEO}$	Collector-Emitter Voltage	$I_B=0$	MJ2500	-60	V
			MJ2501	-80	
$V_{EBO}$	Emitter-Base Voltage	$I_C=0$	MJ2500	-5.0	V
			MJ2501		
$I_C$	Collector Current		MJ2500	-10	A
			MJ2501		
$I_B$	Base Current		MJ2500	-0.2	A
			MJ2501		
$P_T$	Power Dissipation	@ $T_C < 25^\circ$	MJ2500 MJ2501	150	W
$T_J$	Junction Temperature		MJ2500	200	°C
$T_s$	Storage Temperature		MJ2501	-65 to +200	

### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJ-C}$	Thermal Resistance, Junction to Case	1.17	°C/W

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### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

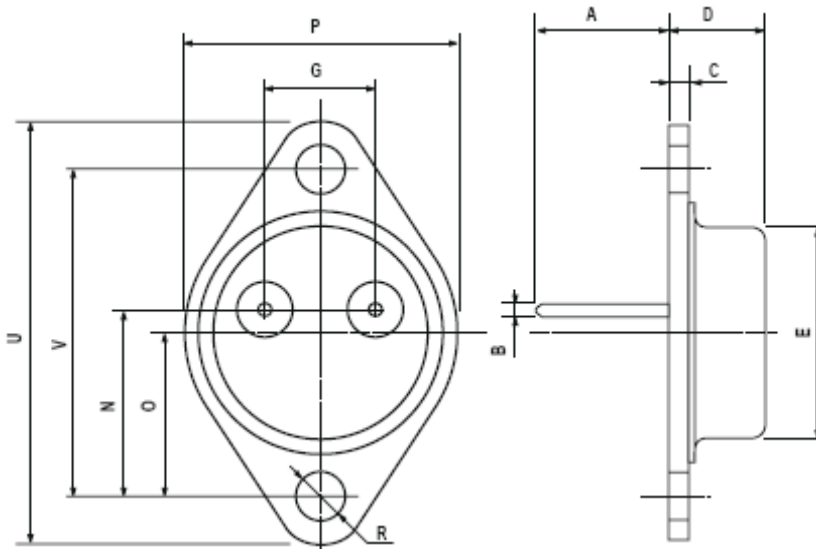
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
<b>BV<sub>CEO</sub></b>	Collector-Emitter Breakdown Voltage (*)	I <sub>C</sub> =-100mA I <sub>B</sub> =0	MJ2500 -60	-	-	V
			MJ2501 -80	-	-	
<b>I<sub>CEO</sub></b>	Collector Cutoff Current	V <sub>CE</sub> =-30 V I <sub>B</sub> =0	MJ2500	-	-	mA
		V <sub>CE</sub> =-40 V I <sub>B</sub> =0	MJ2501	-	-	
<b>I<sub>EBO</sub></b>	Emitter Cutoff Current	V <sub>BE</sub> =-5.0 V I <sub>C</sub> =0	MJ2500 MJ2501	-	-	mA
<b>I<sub>CER</sub></b>	Collector-Emitter Leakage Current	V <sub>CB</sub> =-60 V R <sub>BE</sub> =1.0 kΩ	MJ2500	-	-	mA
		V <sub>CB</sub> =-80 V R <sub>BE</sub> =1.0 kΩ	MJ2501	-	-	
		V <sub>CB</sub> =-60 V R <sub>BE</sub> =1.0 kΩ T <sub>C</sub> =150°C	MJ2500	-	-	-5.0
		V <sub>CB</sub> =-80 V R <sub>BE</sub> =1.0 kΩ T <sub>C</sub> =150°C	MJ2501	-	-	
<b>V<sub>CE(SAT)</sub></b>	Collector-Emitter saturation Voltage (*)	I <sub>C</sub> =-5.0 A I <sub>B</sub> =-20 mA	MJ2500 MJ2501	-	-	V
		I <sub>C</sub> =-10 A I <sub>B</sub> =-50 mA	MJ2500 MJ2501	-	-	
<b>V<sub>BE</sub></b>	Base-Emitter Voltage (*)	I <sub>C</sub> =-5.0 A V <sub>CE</sub> =-3.0V	MJ2500 MJ2501	-	-	V
<b>h<sub>FE</sub></b>	DC Current Gain (*)	V <sub>CE</sub> =-3.0 V I <sub>C</sub> =-5.0 A	MJ2500 MJ2501	1000	-	-

(\*) Pulse Width ≈ 300 μs, Duty Cycle < 2.0%

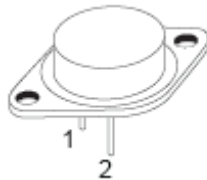
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### MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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