COMSET SEMICONDUCTORS

PNP| MJ2500/MJ2501
NPN| MJ3000/MJ3001

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 intented for use in power linear and switching applications.

The complementary NPN types are the MJ3000 and MJ3001 respectively.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings			Value	Unit
V_{CBO}	*Collector-Base Voltage*	I_E=0	**MJ2500 MJ3000**	60	Vdc
			MJ2501 MJ3001	80	
V_{CEO}	*Collector-EmitterVoltage*	I_B=0	**MJ2500 MJ3000**	60	Vdc
			MJ2501 MJ3001	80	
V_{EBO}	*Emitter-Base Voltage*	I_C=0	**MJ2500 MJ3000**	5.0	Vdc
			MJ2501 MJ3001		
I_C	*Collector Current*		**MJ2500 MJ3000**	10	Adc
			MJ2501 MJ3001		
I_B	*Base Current*		**MJ2500 MJ3000**	0.2	Adc
			MJ2501 MJ3001		
P_T	*Power Dissipation*	*@ T_C < 25°*	**MJ2500 MJ3000**	150	Watts
			MJ2501 MJ3001		
T_J T_s	*Junction Storage Temperature*		**MJ2500 MJ3000**	200	°C
			MJ2501 MJ3001	-65 to +200	

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THERMAL CHARACTERISTICS

Symbol	Ratings		Value	Unit
R_{thJ-C}	*Thermal Resistance, Junction to Case*	**MJ2500 MJ3000**	1.17	°C/W
		MJ2501 MJ3001		

ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)		Min	Typ	Mx	Unit
BV_{CEO}	*Collector-Emitter Breakdown Voltage (*)*	I_C=100 mAdc, I_B=0	**MJ2500 MJ3000**	60	-	-	Vdc
			MJ2501 MJ3001	80	-	-	
I_{CEO}	*Collector Cutoff Current*	V_{CE}=30 Vdc, I_B=0	**MJ2500 MJ3000**	-	-	1.0	mAdc
		V_{CE}=40 Vdc, I_B=0	**MJ2501 MJ3001**	-	-		
I_{EBO}	*Emitter Cutoff Current*	V_{BE}=5.0 Vdc, I_C=0	**MJ2500 MJ3000**	-	-	2.0	mAdc
			MJ2501 MJ3001				
I_{CER}	*Collector-Emitter Leakage Current*	V_{CB}=60 V, R_{BE}=1.0 k ohm	**MJ2500 MJ3000**	-	-	1.0	mAdc
		V_{CB}=80 V, R_{BE}=1.0 k ohm	**MJ2501 MJ3001**	-	-		
		V_{CB}=60 V, R_{BE}=1.0 k ohm, T_C=150°C	**MJ2500 MJ3000**	-	-	5.0	
		V_{CB}=80 V, R_{BE}=1.0 k ohm, T_C=150°C	**MJ2501 MJ3001**	-	-		
$V_{CE(SAT)}$	*Collector-Emitter saturation Voltage (*)*	I_C=5.0 A, I_B=20 mAdc	**MJ2500 MJ3000**	-	-	2.0	Vdc
			MJ2501 MJ3001				
		I_C=10 A, I_B=50 mAdc	**MJ2500 MJ3000**	-	-	4.0	
			MJ2501 MJ3001				
V_{BE}	*Base-Emitter Voltage (*)*	I_C=5.0 Adc, V_{CE}=3.0Vdc	**MJ2500 MJ3000**	-	-	3	V
			MJ2501 MJ3001				

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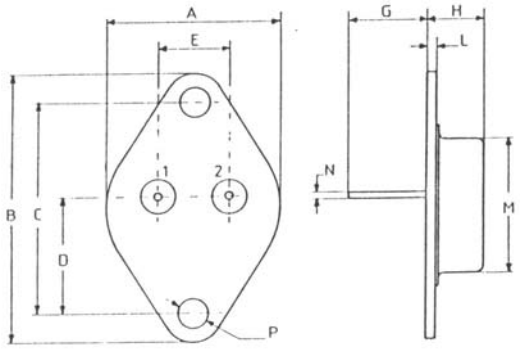
h_{FE}	*DC Current Gain (*)*	V_{CE}=3.0 Vdc, I_C=5.0 Adc	**MJ2500 MJ3000** / **MJ2501 MJ3001**	1000	-	-	-

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

! ! ! For PNP types current and voltage values are negative ! ! !

MECHANICAL DATA CASE TO-3

DIMENSIONS		
	mm	inches
A	25,51	1,004
B	38,93	1,53
C	30,12	1,18
D	17,25	0,68
E	10,89	0,43
G	11,62	0,46
H	8,54	0,34
L	1,55	0,6
M	19,47	0,77
N	1	0,04
P	4,06	0,16



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector