PNP MJ3000 – MJ3001

COMPLEMENTARY POWER DARLINGTONS

The MJ3000, and MJ3001 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 PNP types are the MJ2500 and MJ2501 respectively
Compliance to RoHS

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings			Value	Unit
V_{CBO}	Collector-Base Voltage	I_E=0	MJ3000	60	V
			MJ3001	80	
V_{CEO}	Collector-EmitterVoltage	I_B=0	MJ3000	60	V
			MJ3001	80	
V_{EBO}	Emitter-Base Voltage	I_C=0	MJ3000	5.0	V
			MJ3001		
I_C	Collector Current		MJ3000	10	A
			MJ3001		
I_B	Base Current		MJ3000	0.2	A
			MJ3001		
P_T	Power Dissipation	@ T_C < 25°	MJ3000	150	W
			MJ3001		
T_J	Junction Temperature		MJ3000	200	°C
T_s	Storage Temperature		MJ3001	-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
BV_{CEO}	Collector-Emitter Breakdown Voltage (*)	I_C=100mA I_B=0	MJ3000	60	-	-	V
			MJ3001	80	-	-	
I_{CEO}	Collector Cutoff Current	V_{CE}=30 V I_B=0	MJ3000	-	-	1.0	mA
		V_{CE}=40 V I_B=0	MJ3001	-	-		
I_{EBO}	Emitter Cutoff Current	V_{BE}=5.0 V I_C=0	MJ3000	-	-	2.0	mA
			MJ3001				
I_{CER}	Collector-Emitter Leakage Current	V_{CB}=60 V R_{BE}=1.0 kΩ	MJ3000	-	-	1.0	mA
		V_{CB}=80 V R_{BE}=1.0 kΩ	MJ3001	-	-		
		V_{CB}=60 V R_{BE}=1.0 kΩ T_C=150°C	MJ3000	-	-	5.0	
		V_{CB}=80 V R_{BE}=1.0 kΩ T_C=150°C	MJ3001	-	-		
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	I_C=5.0 A I_B=20 mA	MJ3000	-	-	2.0	V
			MJ3001				
		I_C=10 A I_B=50 mA	MJ3000	-	-	4.0	
			MJ3001				
V_{BE}	Base-Emitter Voltage (*)	I_C=5.0 A V_{CE}=3.0V	MJ3000	-	-	3	V
			MJ3001				
h_{FE}	DC Current Gain (*)	V_{CE}=3.0 V I_C=5.0 A	MJ3000	1000	-	-	-
			MJ3001				

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

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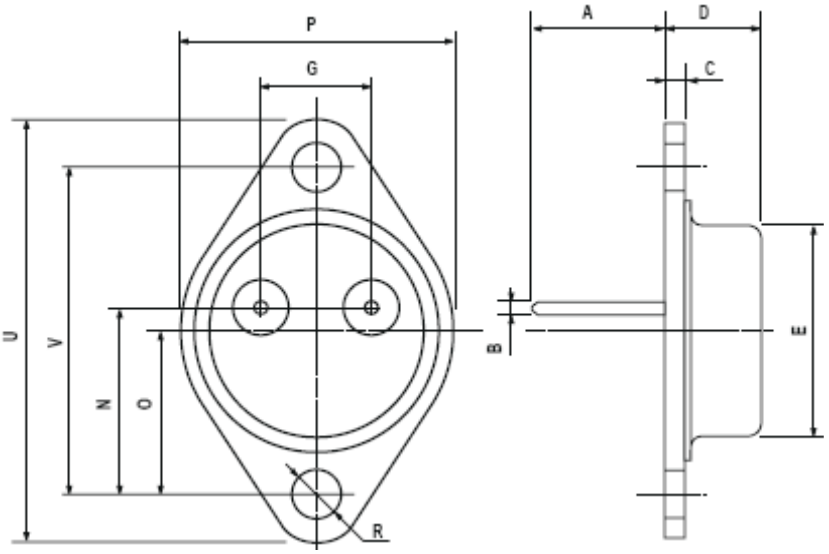
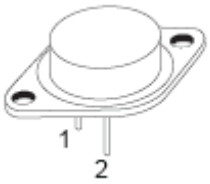
MECHANICAL DATA CASE TO-3

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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