

MJ900 – MJ901 PNP

COMPLEMENTARY POWER DARLINGTONS

The MJ900, MJ901, MJ1000 and MJ1001 are silicon epitaxial-bas 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. Their complementary NPN types are the MJ1000 and MJ1001 respectively. Compliance to RoHS

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
V_{CBO}	Collector-Base Voltage		MJ900	-60	V
			MJ901	-80	
V_{CEO}	Collector-Emitter Voltage	$I_B=0$	MJ900	-60	V
			MJ901	-80	
V_{EBO}	Emitter-Base Voltage		MJ900	-5.0	V
			MJ901		
I_C	Collector Current	$I_{C(RMS)}$	MJ900	-8.0	A
			MJ901		
I_B	Base Current		MJ900	-0.1	A
			MJ901		
P_T	Power Dissipation	@ $T_C < 25^\circ$	MJ900	90	W
		Derate above 25°C	MJ901	0.515	W/ $^\circ\text{C}$
T_J	Junction Temperature		MJ900	-65 to +200	$^\circ\text{C}$
			MJ901		
T_S	Storage Temperature		MJ900	-65 to +200	$^\circ\text{C}$
			MJ901		

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
R_{thJ-C}	Thermal Resistance, Junction to Case	1.94	$^\circ\text{C}/\text{W}$

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

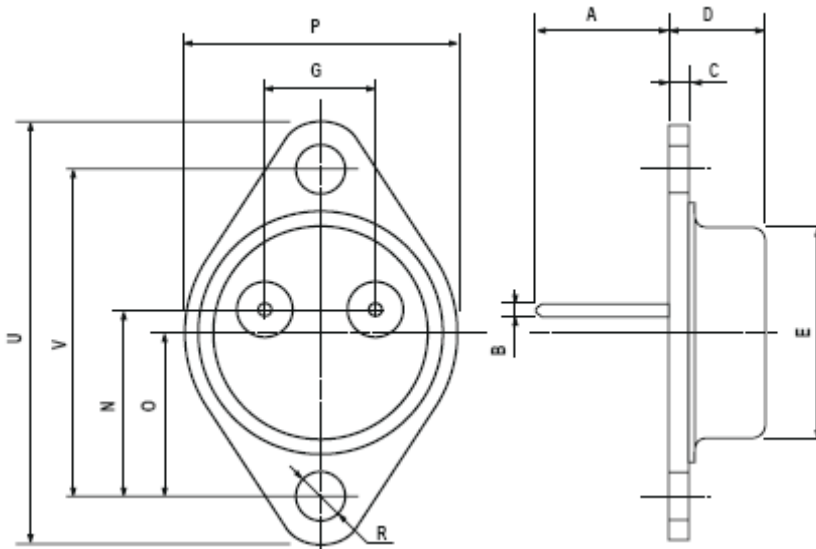
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
V_{CEO}	Collector-Emitter Breakdown Voltage (*)	$I_C=-100\text{ mA}, I_B=0$	MJ900	-60	-	-	V
			MJ901	-80	-	-	
I_{CEO}	Collector Cutoff Current	$V_{CE}=-30\text{ V}, I_B=0$	MJ900	-	-	-500	μA
		$V_{CE}=-40\text{ V}, I_B=0$	MJ901	-	-		
I_{EBO}	Emitter Cutoff Current	$V_{BE}=-5.0\text{ V}, I_C=0$	MJ900	-	-	-2.0	mA
			MJ901	-	-		
I_{CER}	Collector-Emitter Leakage Current	$V_{CB}=-60\text{ V}, R_{BE}=1.0\text{ k}\Omega$	MJ900	-	-	-1.0	mA
		$V_{CB}=-80\text{ V}, R_{BE}=1.0\text{ k}\Omega$	MJ901	-	-		
		$V_{CB}=-60\text{ V}, R_{BE}=1.0\text{ k}\Omega$ $T_C=150^\circ\text{C}$	MJ900	-	-	-5.0	
		$V_{CB}=-80\text{ V}, R_{BE}=1.0\text{ k}\Omega$ $T_C=150^\circ\text{C}$	MJ901	-	-		
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=-3.0\text{ A}, I_B=-2\text{ mA}$	MJ900	-	-	-2.0	V
			MJ901	-	-		
		$I_C=-8.0\text{ A}, I_B=-40\text{ mA}$	MJ900	-	-	-4.0	
			MJ901	-	-		
V_F	Forward Voltage (pulse method)	$I_F=-3\text{ A}$	MJ900	-	-1.8	-	V
			MJ901	-	-	-	
V_{BE}	Base-Emitter Voltage (*)	$I_C=-3.0\text{ A}, V_{CE}=-3.0\text{ V}$	MJ900	-	-	-2.5	V
			MJ901	-	-		
H_{FE}	DC Current Gain (*)	$V_{CE}=-3.0\text{ V}, I_C=-3.0\text{ A}$	MJ900	1000	-	-	-
			MJ901				
		$V_{CE}=-3.0\text{ V}, I_C=-4.0\text{ A}$	MJ900	750	-	-	
			MJ901				

(*) Pulse Width $\approx 300\ \mu\text{s}$, Duty Cycle $\angle 2.0\%$

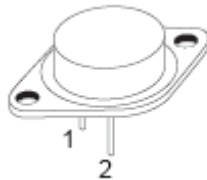
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MECHANICAL DATA CASE TO-3

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



Revised September 2012

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