



MJ4030/1/2
MJ4033/4/5

MEDIUM POWER COMPLEMENTARY SILICON TRANSISTORS

For use as output devices in complementary general purpose amplifier applications.

- High DC current Gain – $h_{FE}=3500$ (Typ) @ $I_C=10$ Adc
 - Monolithic Construction with Built-in Base Emitter Shunt Resistor
- The MJ4030/31/32 are the transistors NPN
 The complementary PNP types are the MJ4033/34/35

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
V_{CBO}	<i>Collector-Base Voltage</i>	$I_E=0$	MJ4030 MJ4033	60	V
			MJ4031 MJ4034	80	
			MJ4032 MJ4035	100	
V_{CEO}	<i>Collector-Emitter Voltage</i>	$I_B=0$	MJ4030 MJ4033	60	V
			MJ4031 MJ4034	80	
			MJ4032 MJ4035	100	
V_{EBO}	<i>Emitter-Base Voltage</i>	$I_C=0$	MJ4030 MJ4033	5.0	V
			MJ4031 MJ4034		
			MJ4032 MJ4035		



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I_C	<i>Collector Current</i>		MJ4030	16	A
			MJ4033		
			MJ4031	0.5	A
			MJ4034		
			MJ4032	150	Watts
			MJ4035		
P_T	<i>Power Dissipation</i>	@ $T_C < 25^\circ$	MJ4030	200	$^\circ\text{C}$
			MJ4033		
			MJ4031	-65 to +200	$^\circ\text{C}$
			MJ4034		
			MJ4032	-65 to +200	$^\circ\text{C}$
			MJ4035		

THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit	
R_{thJ-C}	<i>Thermal Resistance, Junction to Case</i>	MJ4030	1.17	$^\circ\text{C/W}$
		MJ4033		
		MJ4031	1.17	$^\circ\text{C/W}$
		MJ4034		
		MJ4032	1.17	$^\circ\text{C/W}$
		MJ4035		



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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Mx	Unit	
V_{CEO}	<i>Collector-Emitter Voltage (*)</i>	$I_C=100 \text{ mAdc}, I_B=0$	MJ4030 MJ4033	60	-	-	V
			MJ4031 MJ4034	80	-	-	
			MJ4032 MJ4035	100	-	-	
I_{CEO}	<i>Collector Cutoff Current</i>	$V_{CE}=30 \text{ Vdc}, I_B=0$	MJ4030 MJ4033	-	-	3.0	mA
		$V_{CE}=40 \text{ Vdc}, I_B=0$	MJ4031 MJ4034	-	-		
		$V_{CE}=50 \text{ Vdc}, I_B=0$	MJ4032 MJ4035	-	-		
I_{EBO}	<i>Emitter Cutoff Current</i>	$V_{BE}=5.0 \text{ V}, I_C=0$	MJ4030 MJ4033	-	-	5.0	mA
			MJ4031 MJ4034				
			MJ4032 MJ4035				
I_{CER}	<i>Collector-Emitter Leakage Current</i>	$V_{CB}=60 \text{ V}, R_{BE}=1.0 \text{ k ohm}$	MJ4030 MJ4033	-	-	1.0	mAdc
		$V_{CB}=80 \text{ V}, R_{BE}=1.0 \text{ k ohm}$	MJ4031 MJ4034	-	-		
		$V_{CB}=100 \text{ V}, R_{BE}=1.0 \text{ k ohm}$	MJ4032 MJ4035	-	-		
		$V_{CB}=60 \text{ V}, R_{BE}=1.0 \text{ k ohm}, T_C=150^\circ\text{C}$	MJ4030 MJ4033	-	-	5.0	
		$V_{CB}=80 \text{ V}, R_{BE}=1.0 \text{ k ohm}, T_C=150^\circ\text{C}$	MJ4031 MJ4034	-	-		
		$V_{CB}=100 \text{ V}, R_{BE}=1.0 \text{ k ohm}, T_C=150^\circ\text{C}$	MJ4032 MJ4035	-	-		
$V_{CE(SAT)}$	<i>Collector-Emitter saturation Voltage (*)</i>	$I_C=10 \text{ A}, I_B=40 \text{ mAdc}$	MJ4030 MJ4033 MJ4031 MJ4034 MJ4032 MJ4035	-	-	2.5	Vdc

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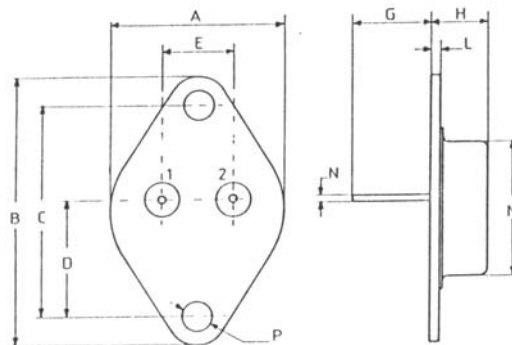
		$I_C=16\text{ A}, I_B=80\text{ mA}$	MJ4030 MJ4033 MJ4031 MJ4034 MJ4032 MJ4035	-	-	4.0	
V_{BE}	Base-Emitter Voltage (*)	$I_C=10\text{ Adc}, V_{CE}=3.0\text{Vdc}$	MJ4030 MJ4033 MJ4031 MJ4034 MJ4032 MJ4035	-	-	3	V
h_{FE}	DC Current Gain (*)	$V_{CE}=10\text{ Vdc}, I_C=3.0\text{ Adc}$	MJ4030 MJ4033 MJ4031 MJ4034 MJ4032 MJ4035	1000	-	-	-

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

!!! 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