



NPN MJ4033 – MJ4034 – MJ4035

MEDIUM POWER COMPLEMENTARY SILICON TRANSISTORS

They are silicon epitaxial-base NPN power transistors in monolithic Darlington configuration and are mounted in Jedec TO-3 metal case.

They are intended for use as output devices in complementary general purpose amplifier applications.

The complementary PNP types are the MJ4030, MJ4031, MJ4032.

Compliance to RoHS

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit	
V_{CBO}	Collector-Base Voltage	$I_E=0$	MJ4033	60	V
			MJ4034	80	
			MJ4035	100	
V_{CEO}	Collector-Emitter Voltage	$I_B=0$	MJ4033	60	V
			MJ4034	80	
			MJ4035	100	
V_{EBO}	Emitter-Base Voltage	$I_C=0$	MJ4033	5.0	V
			MJ4034		
			MJ4035		
I_C	Collector Current		16	A	
I_B	Base Current		0.5	A	
P_T	Power Dissipation	@ $T_C < 25^\circ$	150	W	
T_J	Junction Temperature		200	°C	
T_s	Storage Temperature		-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

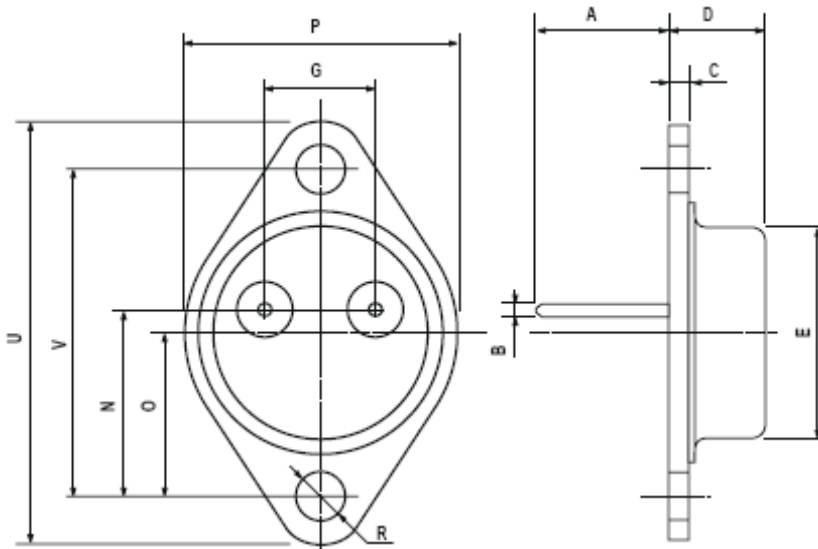
Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit	
V_{CEO}	Collector-Emitter Voltage (*)	$I_C=100\text{ mA}, I_B=0$	MJ4033	60	-	-	V
			MJ4034	80	-	-	
			MJ4035	100	-	-	
I_{CEO}	Collector Cutoff Current	$V_{CE}=30\text{ Vdc}, I_B=0$	MJ4033	-	-	3.0	mA
		$V_{CE}=40\text{ Vdc}, I_B=0$	MJ4034	-	-		
		$V_{CE}=50\text{ V}, I_B=0$	MJ4035	-	-		
I_{EBO}	Emitter Cutoff Current	$V_{BE}=5.0\text{ V}, I_C=0$	MJ4033	-	-	5.0	mA
			MJ4034				
			MJ4035				
I_{CER}	Collector-Emitter Leakage Current	$V_{CB}=60\text{ V}$ $R_{BE}=1.0\text{ k}\Omega$	MJ4033	-	-	1.0	mAdc
		$V_{CB}=80\text{ V}$ $R_{BE}=1.0\text{ k}\Omega$	MJ4034	-	-		
		$V_{CB}=100\text{ V}$ $R_{BE}=1.0\text{ k}\Omega$	MJ4035				
		$V_{CB}=60\text{ V}$ $R_{BE}=1.0\text{ k}\Omega$ $T_C=150^\circ\text{C}$	MJ4033	-	-	5.0	
		$V_{CB}=80\text{ V}$ $R_{BE}=1.0\text{ k}\Omega$ $T_C=150^\circ\text{C}$	MJ4034	-	-		
		$V_{CB}=100\text{ V}$ $R_{BE}=1.0\text{ k}\Omega$ $T_C=150^\circ\text{C}$	MJ4035				
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=10\text{ A}$ $I_B=40\text{ mA}$	MJ4033	-	-	2.5	Vdc
			MJ4034				
			MJ4035				
		$I_C=16\text{ A}$ $I_B=80\text{ mA}$	MJ4033	-	-	4.0	
			MJ4034				
			MJ4035				
V_{BE}	Base-Emitter Voltage (*)	$I_C=10\text{ A}$ $V_{CE}=3.0\text{ V}$	MJ4033	-	-	3	V
			MJ4034				
			MJ4035				
h_{FE}	DC Current Gain (*)	$V_{CE}=10\text{ V}$ $I_C=3.0\text{ A}$	MJ4033	1000	-	-	-
			MJ4034				
			MJ4035				

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

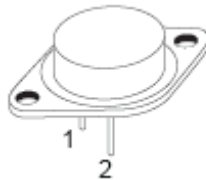
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MECHANICAL DATA CASE TO-3

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



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