NPN Plastic-Encapsulate Transistors

TO-252

General Purpose Amplifier

Low Speed Switching Applications

- Electrically Similar to Popular TIP41C
- The complementary PNP types are MJD42C.

Absolute Maximum Rating (T_C=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	100	V
Collector-Emitter Voltage	BV_{CEO}	100	V
Emitter-Base Voltage	BV_{EBO}	5	V
Collector Current	I_C	2	A
Collector Power Dissipation	P_C	1.5	W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55～150	℃

Electrical Characteristics (T_C=25℃ unless otherwise noted)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	I_C = 100μA，I_E = 0	100			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 1mA，I_B = 0	100			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 100μA，I_C = 0	5			V
Collector cut-off current	I_{CEO}	V_{CB} = 60V，I_B = 0			50	μA
Collector cut-off current	I_{CES}	V_{CE} = 100V，V_{BE} = 0			10	μA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V，I_C = 0			50	μA
* DC current gain	h_{FE}	V_{CE}=2V，I_C= 0.15A V_{CE}=2V，I_C= 1A	100 80			
* Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 1A，I_B = 0.1A			0.6	V
* Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 1A，I_B = 0.1A			1.3	V
Transition frequency	f_T	V_{CE} = 10V，I_B = 0.25A	5			MHz

* Pulse test: PW≤300μs, duty cycle≤2% Pulse

Typical Characteristics

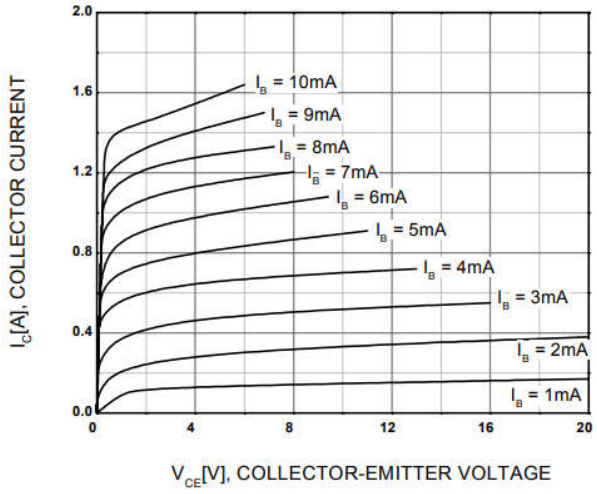


Figure 1. Static Characteristic

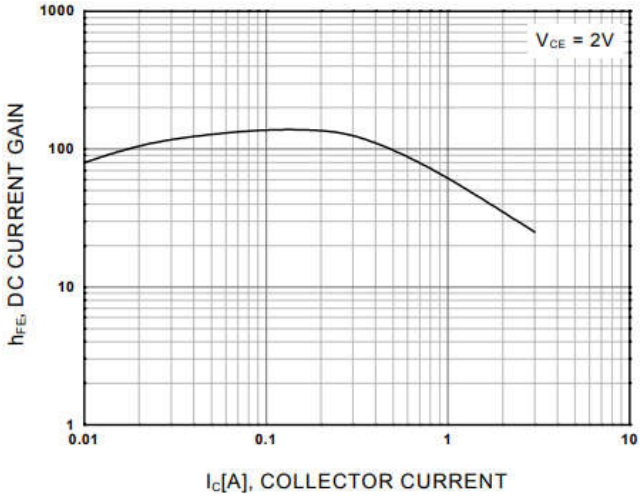


Figure 2. DC current Gain

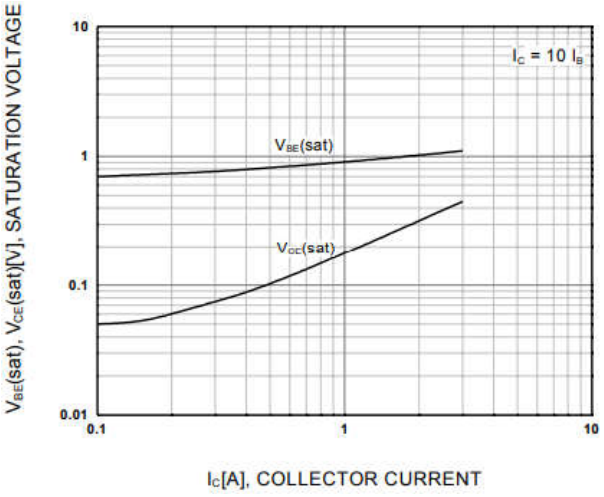


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

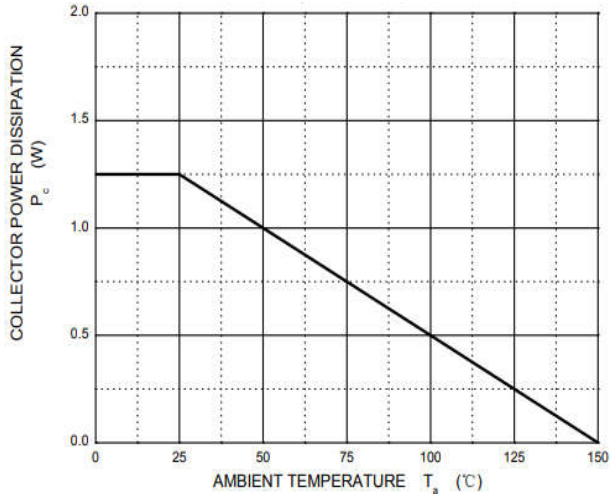


Figure 4. Power Derating

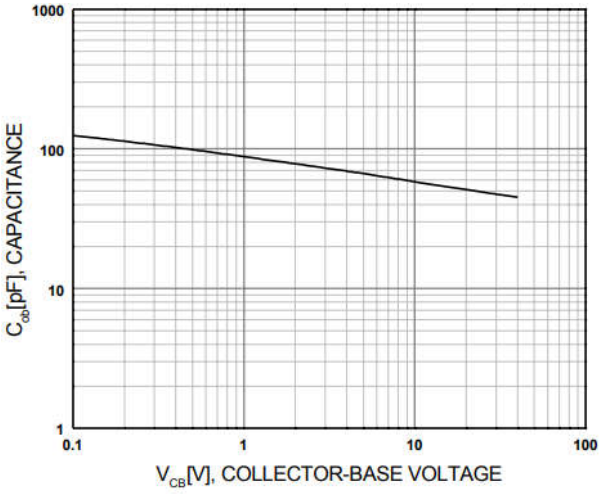


Figure 5. Collector Output Capacitance

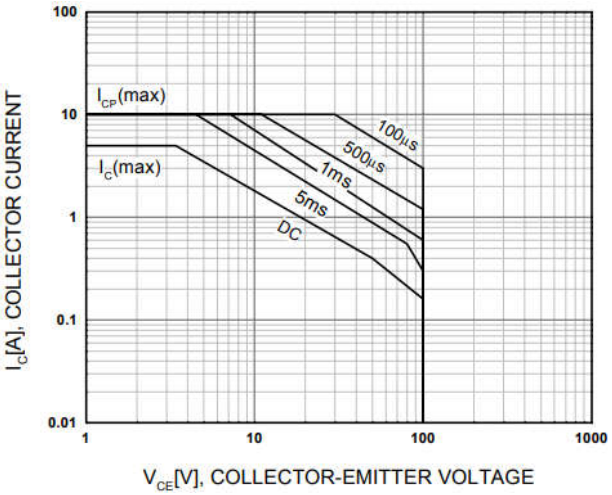
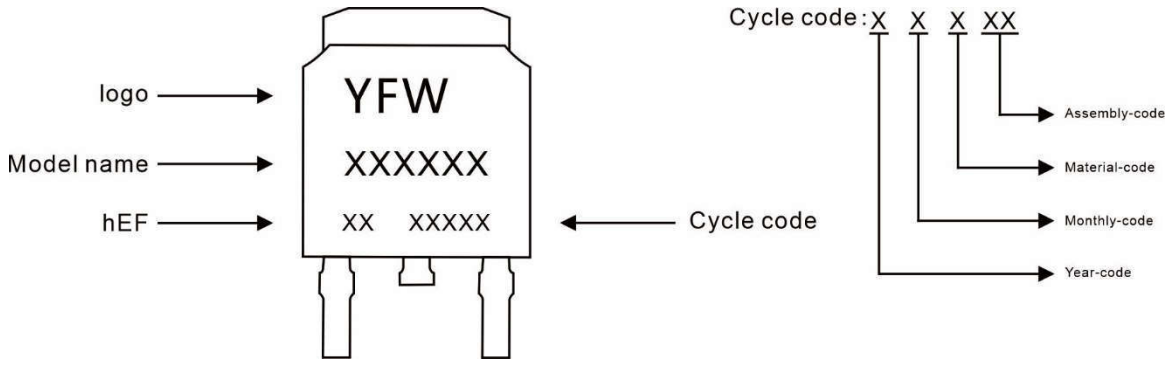


Figure 6. Safe Operating Area

Marking Diagram

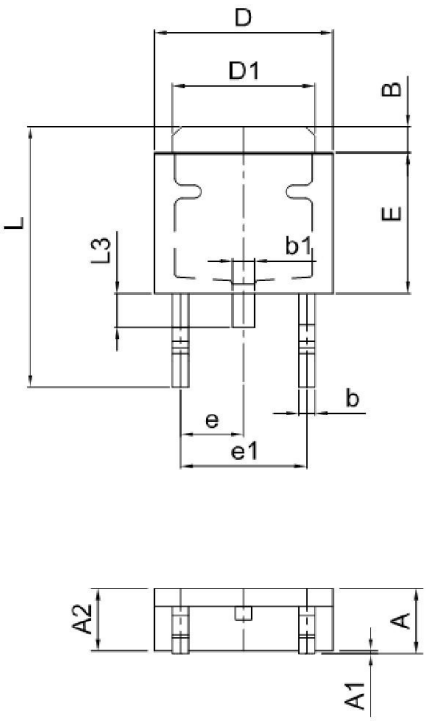


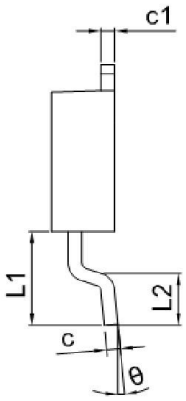
Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MJD41C	TO-252	0.011oz(0.32g)	2500pcs/reel	5000pcs/box 25000pcs/Carton

Package Dimensions

TO-252





Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.098
A1	0.00	0.12	0.000	0.005
A2	2.20	2.40	0.087	0.094
B	1.20	1.60	0.047	0.063
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.35	6.65	0.250	0.262
D1	5.20	5.40	0.205	0.213
E	5.40	5.70	0.213	0.224
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	10.00	11.00	0.393	0.433
L1	2.70	3.10	0.106	0.122
L2	1.40	1.80	0.055	0.071
L3	0.90	1.50	0.035	0.059

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