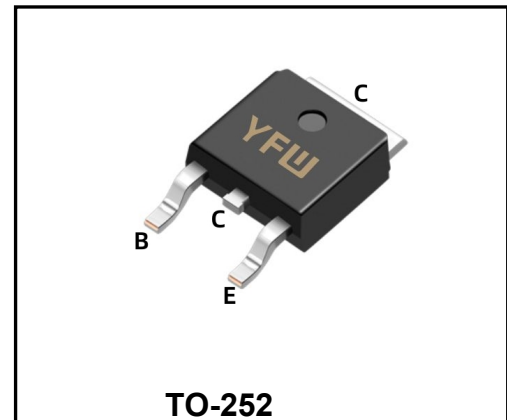


PNP Plastic-Encapsulate Transistors
General Purpose Amplifier

Low Speed Switching Applications

- ♦Electrically Similar to Popular TIP42C
- ♦The complementary PNP types are MJD41C.



Absolute Maximum Rating ($T_C=25^{\circ}\text{C}$ 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	-6	A
Collector Current Pulse		I_{CP}	-10	A
Collector Power Dissipation	$T_a=25^{\circ}\text{C}$	P_C	1.75	W
	$T_C=25^{\circ}\text{C}$		20	
Junction Temperature		T_j	150	$^{\circ}\text{C}$
Storage Temperature		T_{stg}	-55~150	$^{\circ}\text{C}$

Electrical Characteristics ($T_C=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = -100\mu\text{A}$, $I_E = 0$	-100			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}$, $I_B = 0$	-100			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = -100\mu\text{A}$, $I_C = 0$	-5			V
Collector cut-off current	I_{CEO}	$V_{CB} = -60\text{V}$, $I_B = 0$			-50	μA
Collector cut-off current	I_{CES}	$V_{CE} = -100\text{V}$, $V_{BE} = 0$			-10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			-50	μA
DC current gain*	h_{FE}	$V_{CE} = -4\text{V}$, $I_C = -0.3\text{A}$ $V_{CE} = -4\text{V}$, $I_C = -3\text{A}$	30 15		100	
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = -6\text{A}$, $I_B = -0.6\text{A}$			-1.5	V
Base-emitter on voltage*	$V_{BE(on)}$	$V_{CE} = -6\text{V}$, $I_B = -4\text{A}$			-2	V
Transition frequency	f_T	$V_{CE} = -10\text{V}$, $I_B = -0.5\text{A}$	3			MHz

* Pulse test: $PW \leq 300\mu\text{s}$, duty cycle $\leq 2\%$ Pulse

Typical Characteristics

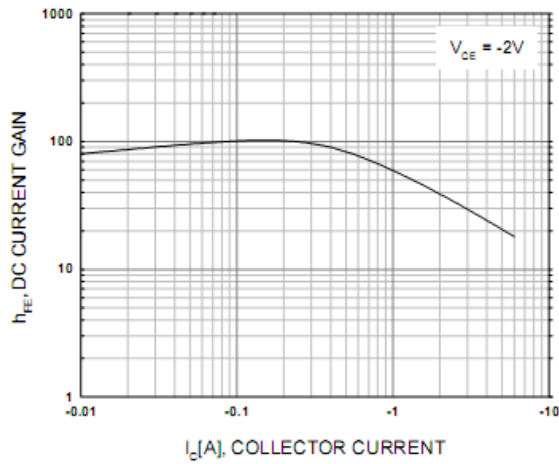
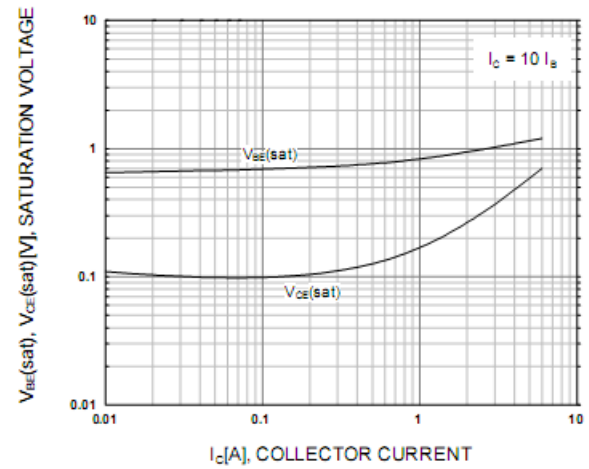


Figure 1. DC current Gain



**Figure 2. . Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**

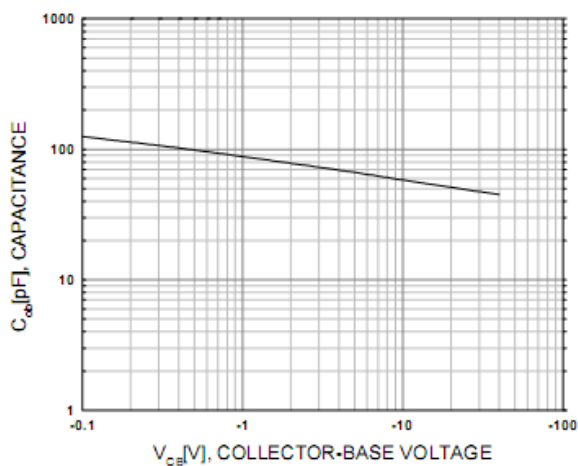


Figure 3 Collector Output Capacitance

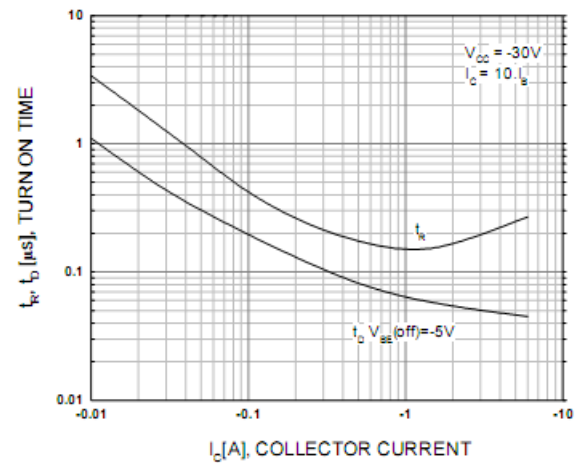


Figure 4. Turn On Time

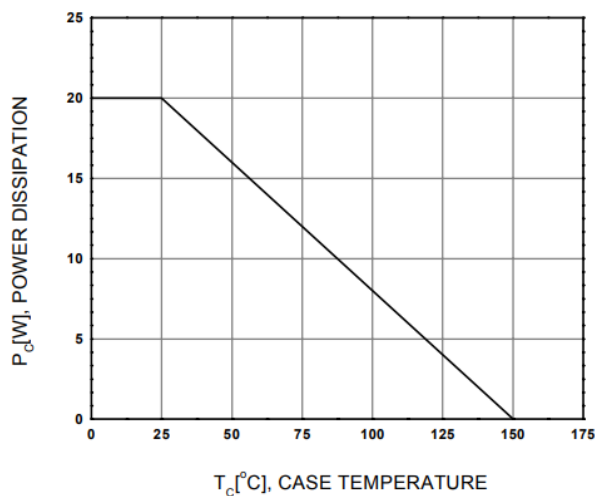


Figure 5. Power Derating

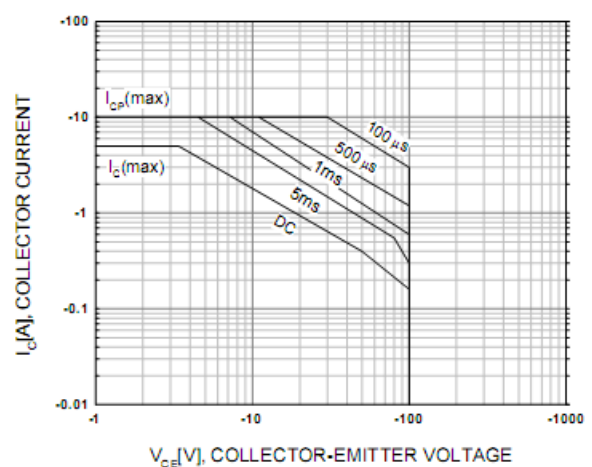
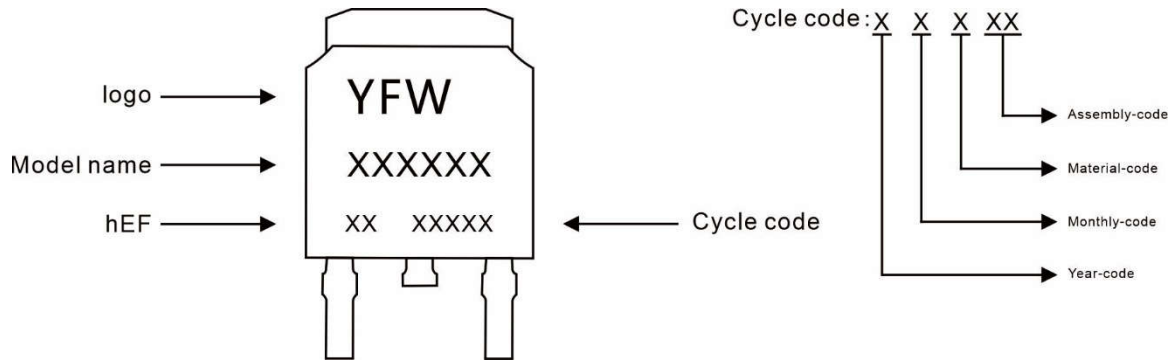


Figure 6 Safe Operating Area

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
MJD42C	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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