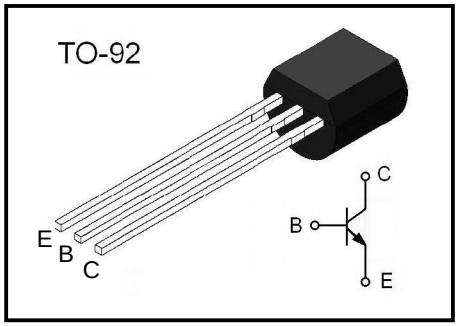
NPN Plastic-Encapsulate Transistors



General Purpose Amplifier

- This device is for use as a medium power amplifier and switch requiring collector currents up to 600mA.

Marking Code	
2N2222A	YFW 2N2222A

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV_{CBO}	75	V
Collector-Emitter Voltage	BV_{CEO}	40	V
Emitter-Base Voltage	BV_{EBO}	6	V
Collector Current	I_C	600	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55～150	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV_{CBO}	I_C = 10μA，I_E = 0	75			V
Collector-emitter breakdown voltage	BV_{CEO}	I_C = 10mA，I_B = 0	40			V
Emitter-base breakdown voltage	BV_{EBO}	I_E = 10μA，I_C = 0	5			V
Collector cut-off current	I_{CBO}	V_{CB} = 60V，I_E = 0			10	nA
Collector cut-off current	I_{CEO}	V_{CE} = 35V，I_E = 0			100	nA
Emitter cut-off current	I_{EBO}	V_{EB} = 3V，I_C = 0			10	nA
DC current gain	h_{FE}	V_{CE}=10V，I_B=0.1mA V_{CE}=10V，I_B=150mA	35 100		300	
*Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 500mA，I_B = 50mA			0.5	V
*Base -emitter saturation voltage	$V_{BE(sat)}$	I_C = 500mA，I_B = 50mA			1.2	V
Transition frequency	f_T	V_{CE} = 20V，I_B = 20mA	300			MHz

* Pulse Test: PW=300μs, duty Cycle=2% Pulsed

Typical Characteristics

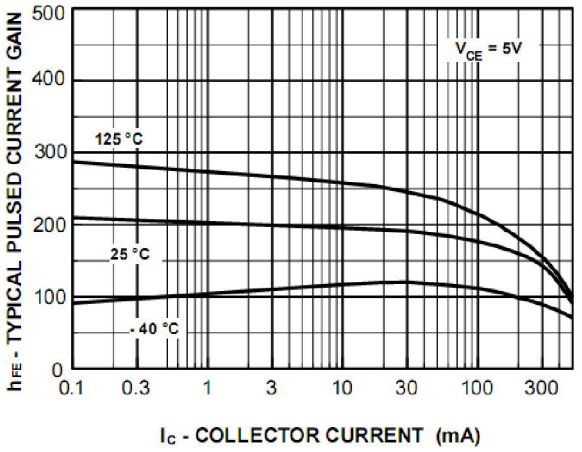


Figure 1. Typical Pulsed Current Gain

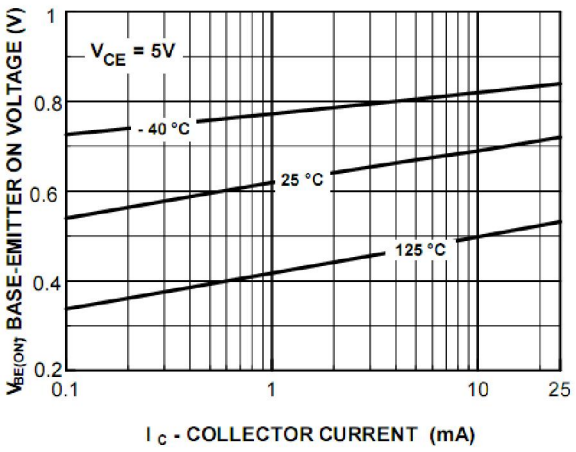


Figure 2. Base-Emitter on Saturation Voltage

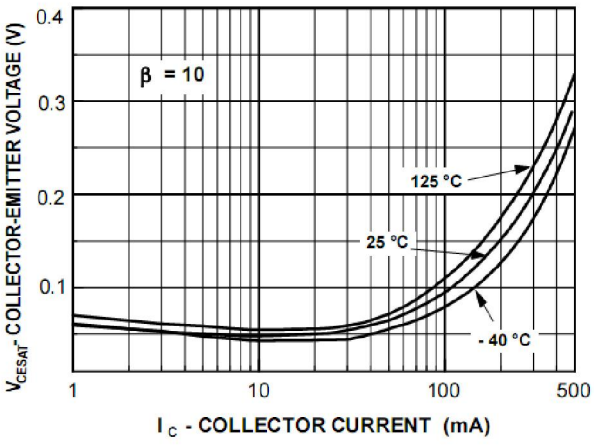


Figure 3. Collector-Emitter Saturation Voltage

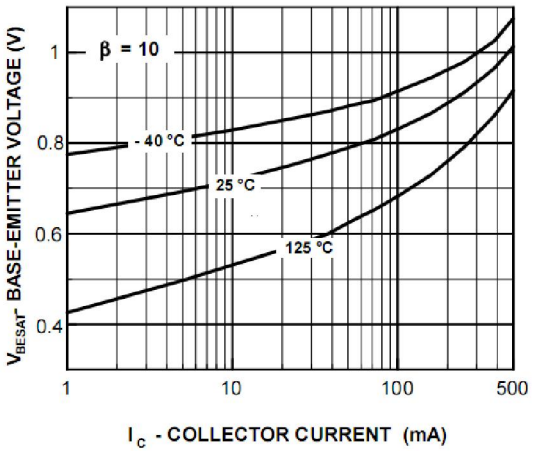


Figure 4. Base-Emitter Saturation Voltage

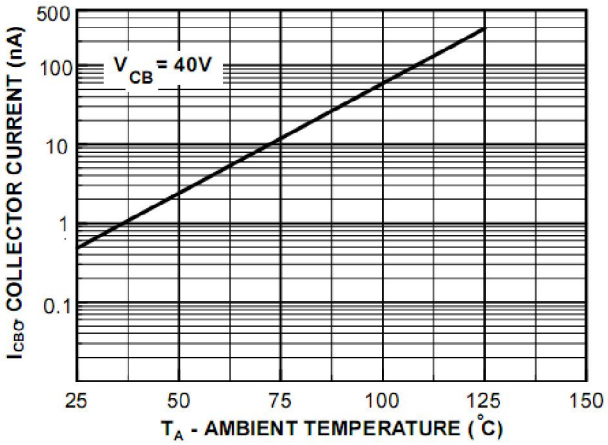


Figure 5. Current Gain Bandwidth Product

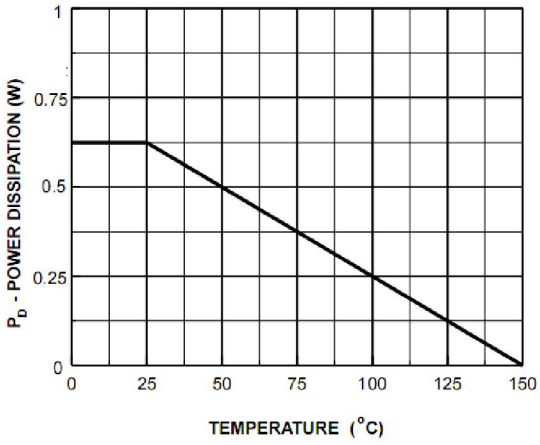


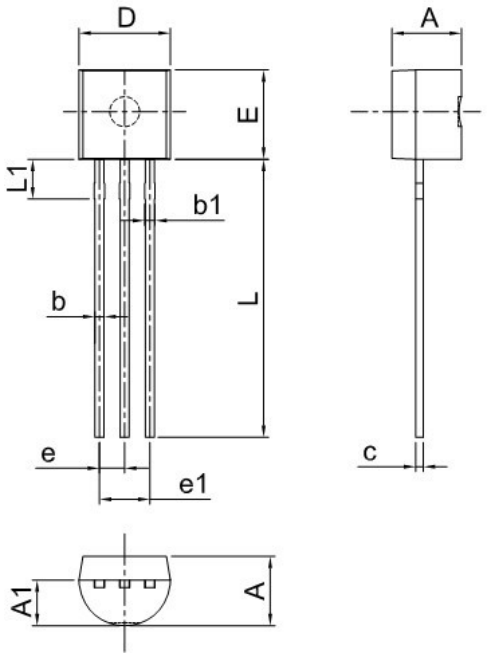
Figure 6. Power Derating

Ordering information

Package	Packing Description	Base Quantity
TO-92	Bulk	1000pcs/Bag
	Tape	2000pcs/Box

Package Dimensions

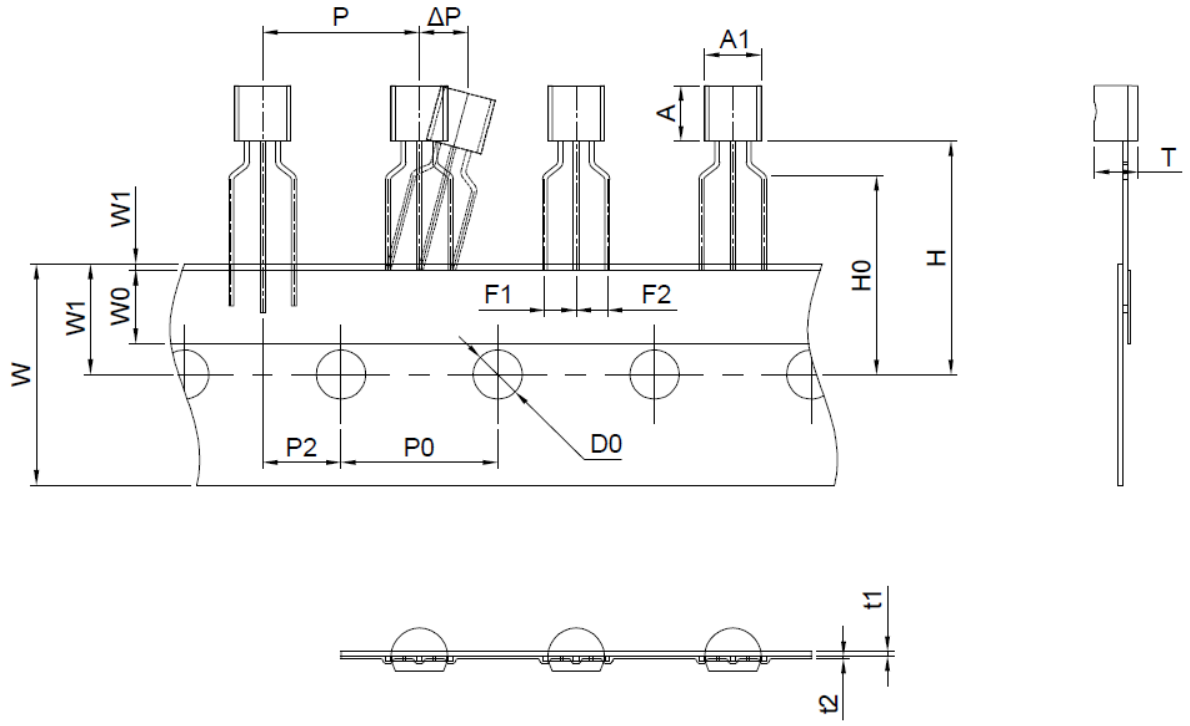
TO-92



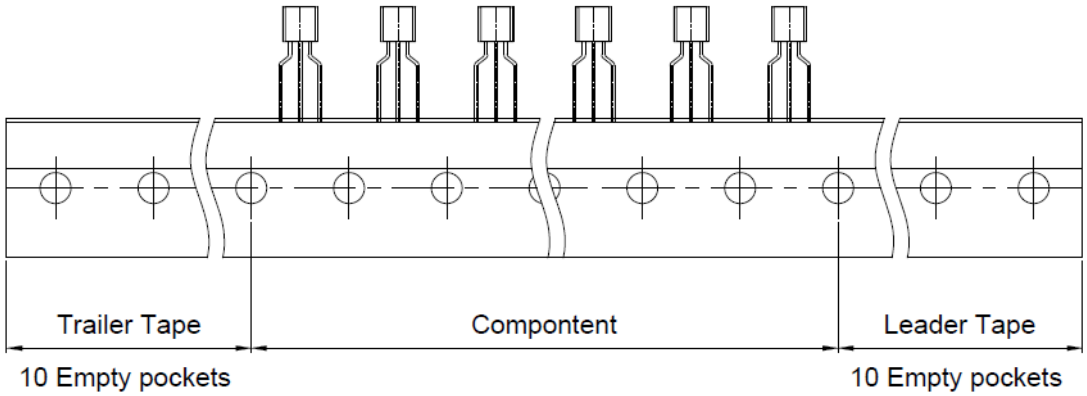
Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.70	0.130	0.146
A1	2.30	2.70	0.091	0.106
b	0.40	0.50	0.016	0.020
b1	0.50	0.70	0.020	0.028
c	0.35	0.45	0.014	0.018
D	4.45	4.70	0.175	0.185
E	4.40	4.65	0.173	0.183
e	1.17	1.37	0.046	0.054
e1	2.34	2.64	0.092	0.104
L	13.50	14.50	0.531	0.571
L1	1.80	2.20	0.071	0.087

Taping Dimensions

TO-92



Dimiensions are in millimeter								
A	**A1**	**T**	**P**	**P0**	**P2**	**F1**	**F2**	**W**
4.6	**4.6**	**3.5**	**12.7**	**12.7**	**6.35**	**2.54**	**2.54**	**18.0**
W0	**W1**	**W2**	**H**	**H0**	**D0**	**t1**	**T2**	**ΔP**
6.0	**9.0**	**1.0Max**	**19.0**	**18.0**	**4.0**	**0.4**	**0.2**	**0**



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