

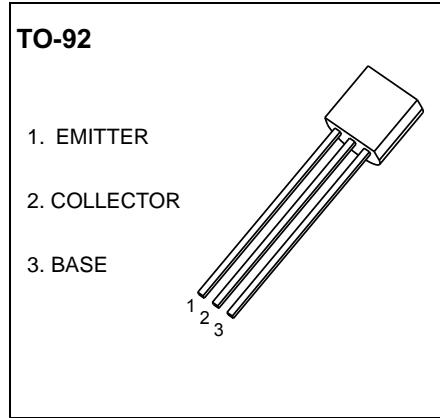


TO-92 Plastic-Encapsulate Transistors

2SC2878A TRANSISTOR (NPN)

FEATURES

- High Emitter-Base Voltage
- Low On Resistance



MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	20	V
V _{EBO}	Emitter-Base Voltage	15	V
I _C	Collector Current -Continuous	0.3	A
P _C	Collector Power Dissipation	0.4	W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-+150	°C

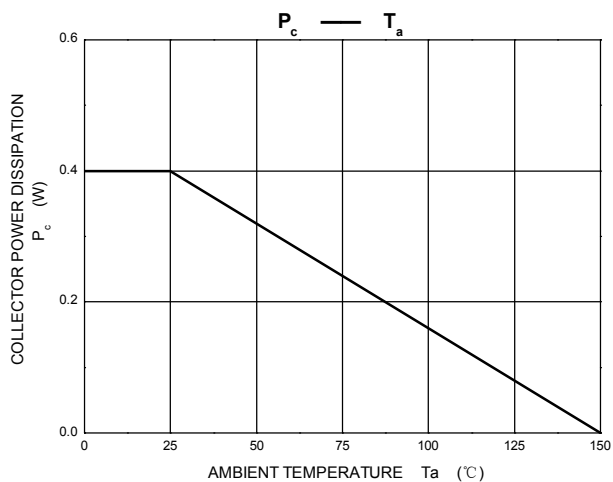
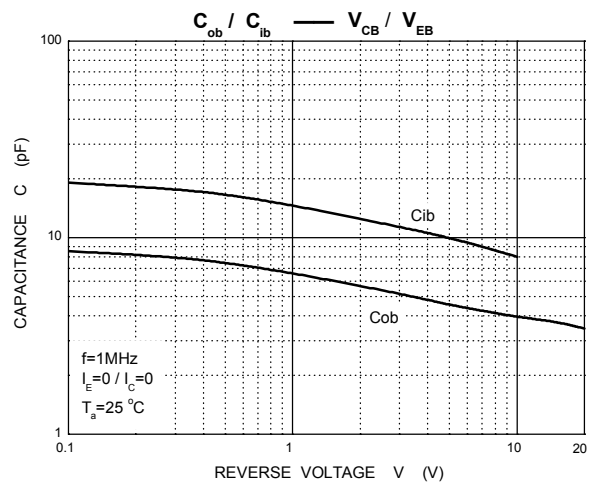
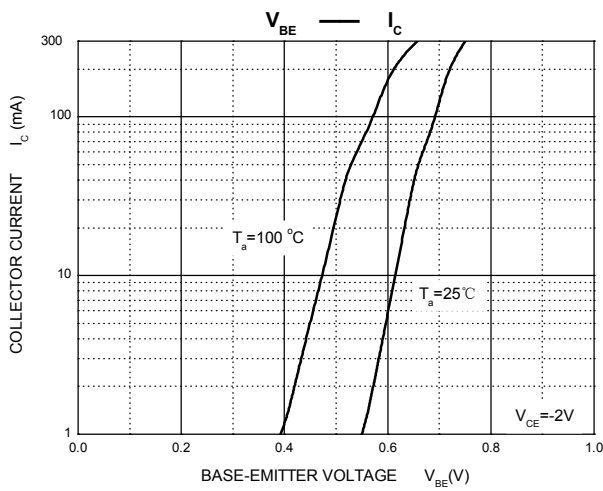
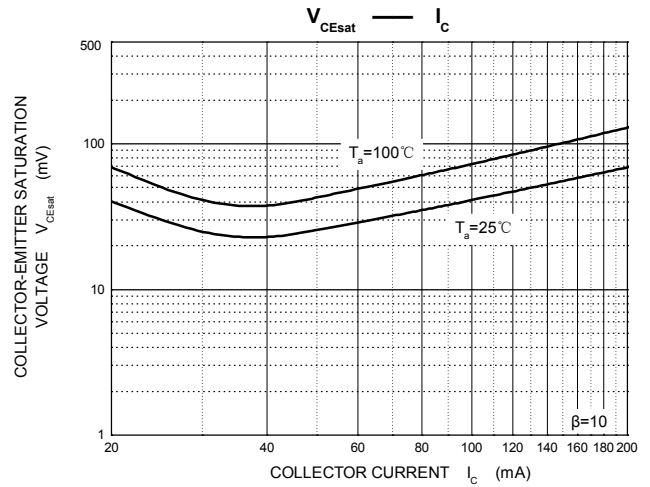
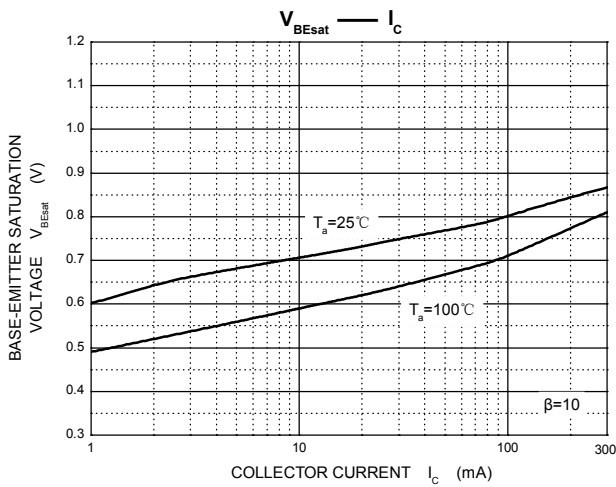
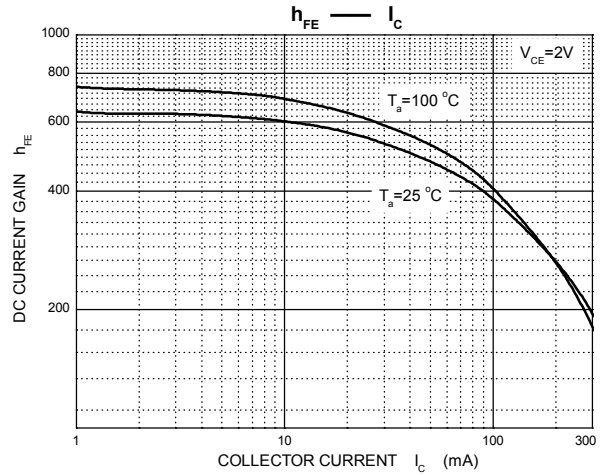
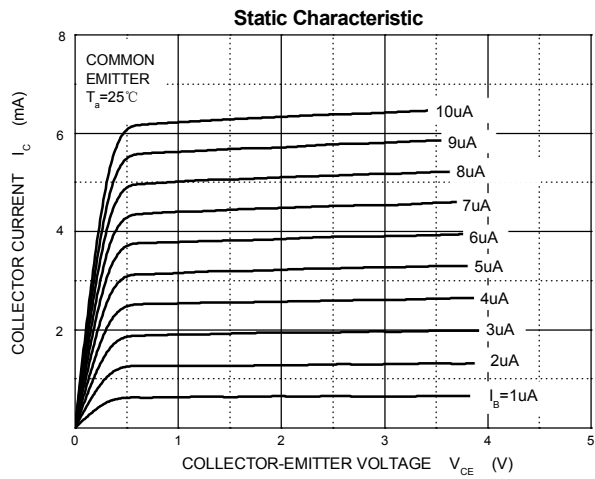
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	20			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	15			V
Collector cut-off current	I _{CBO}	V _{CB} =50V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =15V, I _C =0			0.1	μA
DC current gain	h _{FE}	V _{CE} =2V, I _C =4mA	200		1200	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =30mA, I _B =3mA			0.3	V
Base-emitter voltage	V _{BE(on)}	V _{CE} =2V, I _C =4mA			0.71	V
Transition frequency	f _T	V _{CE} =6V, I _C =4mA		30		MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz			7	pF
Turn-on time	t _{on}	V _{CC} =12V, I _C =12mA, I _B =1.2mA			160	ns
Storage time	t _s				500	ns
Fall time	t _f				130	ns

CLASSIFICATION of h_{FE}

Rank	A	B
Range	200-700	350-1200

Typical Characteristics

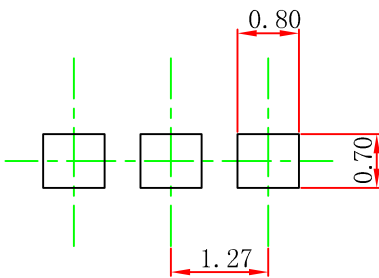


TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

TO-92 Suggested Pad Layout



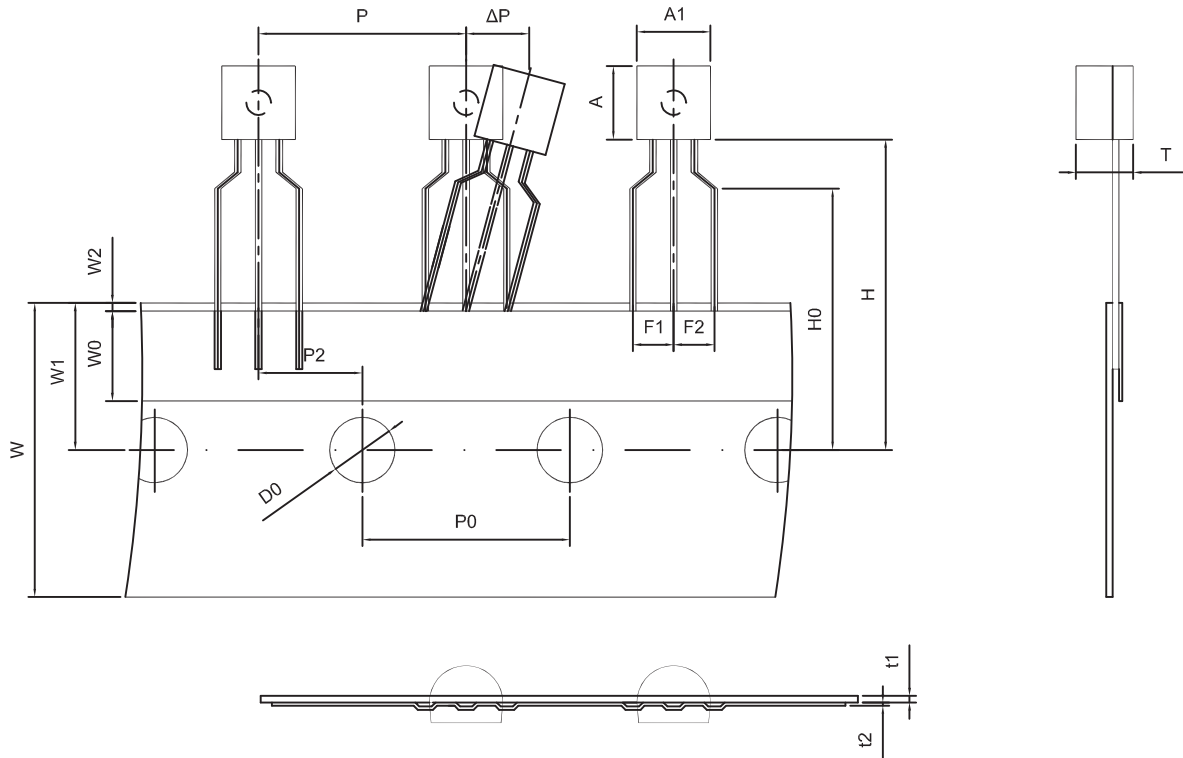
Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

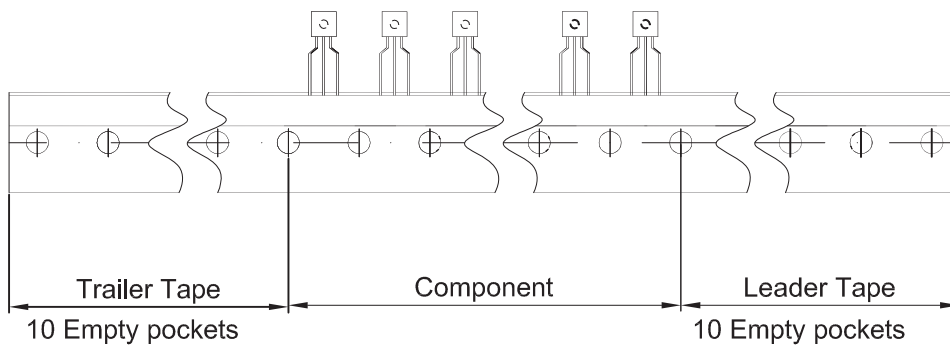
NOTICE

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TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250