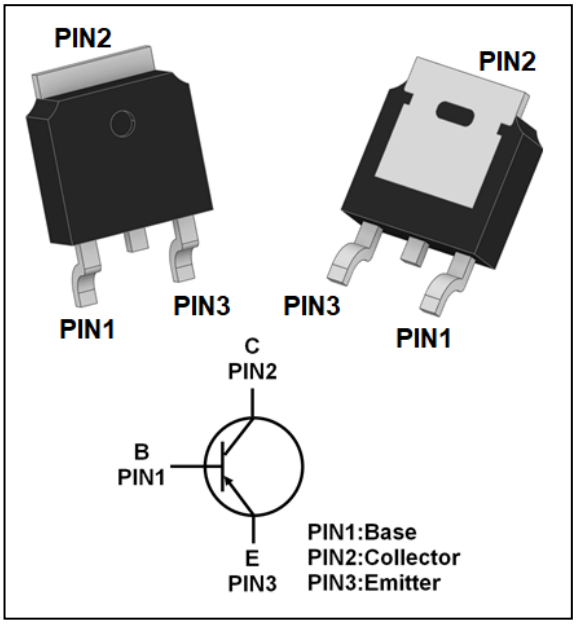
RoHS COMPLIANT

PNP High Power Bipolar Transistor



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1

Applications

- Complement to 2SC4135
- Low Collector Emitter Saturation Voltage
- Fast Switching Speeds

Mechanical Data

- Package: TO-252
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Unit Weight: 0.32g

■ Maximum Ratings (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Value
Device marking code			2SA1593
Collector-base voltage	V_{CBO}	V	-120
Collector-emitter voltage	V_{CEO}	V	-100
Emitter-base voltage	V_{EBO}	V	-6
Collector current	I_C	A	-2
Power dissipation (*)	P_D	W	1.0
Thermal resistance, junction-to-ambient (*)	R_{thJA}	℃/W	125
Junction temperature	T_j	℃	-55 to +150
Storage temperature	T_{STG}	℃	-55 to +150

(*) Device mounted on FR-4 PCB(25.4*25.4*1.0mm)mounting pad.

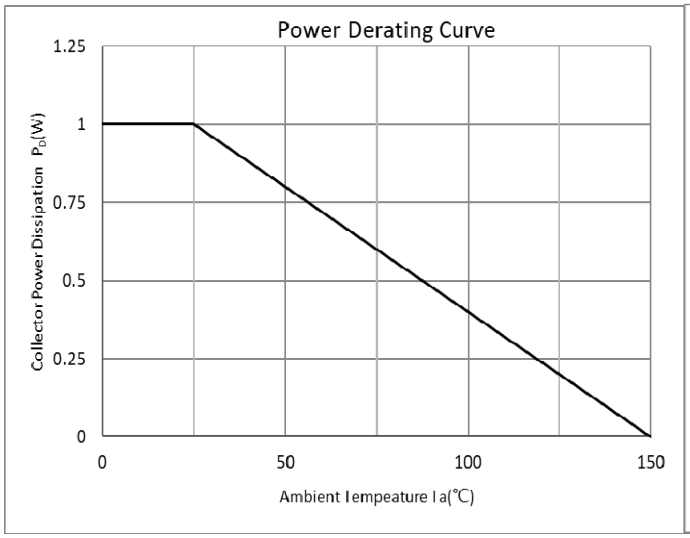
■ Electrical Characteristics (Ta=25℃ unless otherwise noted)

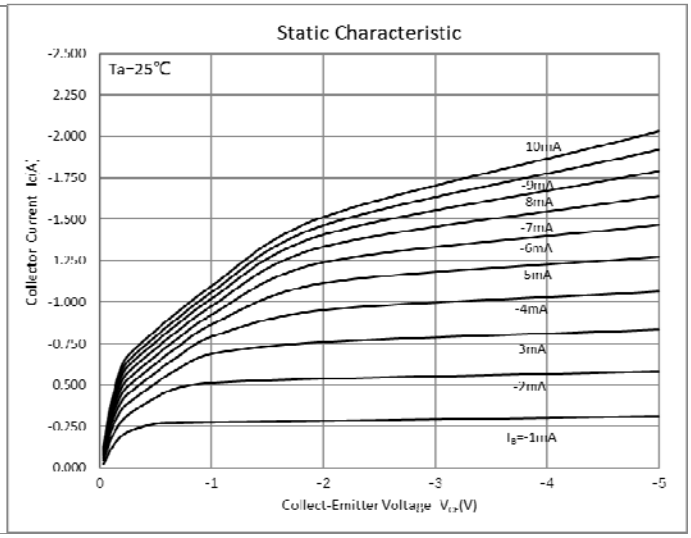
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	I_C= -100uA, I_E=0	-120		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	I_C= -1mA, I_B=0	-100		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	I_E= -100uA, I_C=0	-6		
Collector-base cut-off current	I_{CBO}	nA	V_{CB}=-100V			-100
Emitter-base cut-off current	I_{EBO}	nA	V_{EB}=-4V			-100
DC current gain	h_{FE}		V_{CE}= -5V, I_C= -0.1A	200		400
			V_{CE}= -2V, I_C= -0.5A	130		340
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	I_C= -1A, I_B= -0.1A			-0.6
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	I_C= -1A, I_B= -0.1A			-1.2
Collector-base output capacitance	Cob	pF	V_{CB}=-10V,f=1MHz		24	
Transition frequency	f_T	MHz	VCE=-10V,IC=-250mA,f=10MHz	3		

■ Ordering Information (Example)

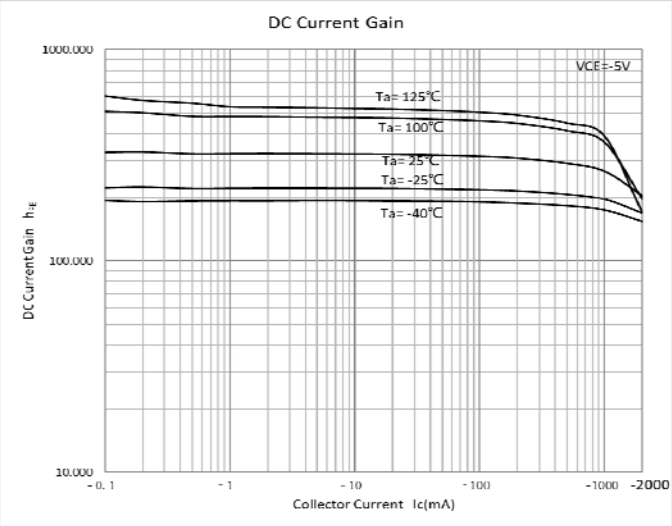
PREFERED P/N	PACKING CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
2SA1593	F1	2500	2500	25000	13”Reel

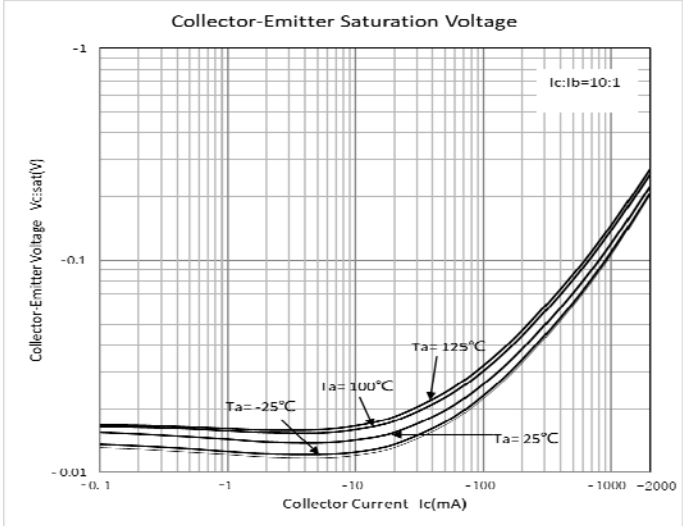
■ Characteristics(Typical)

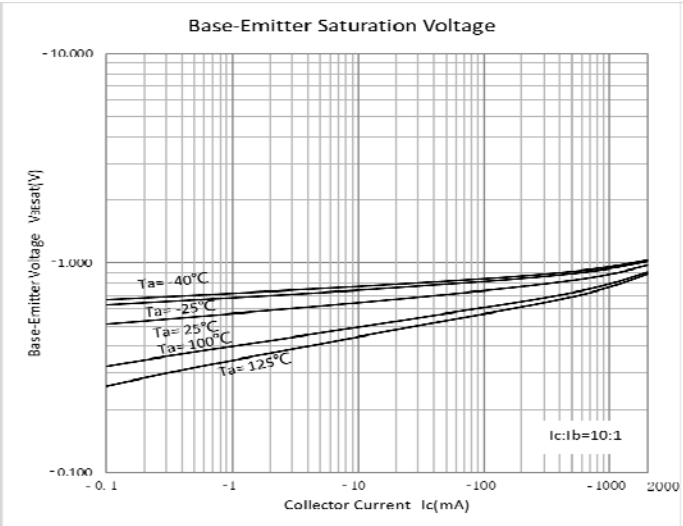


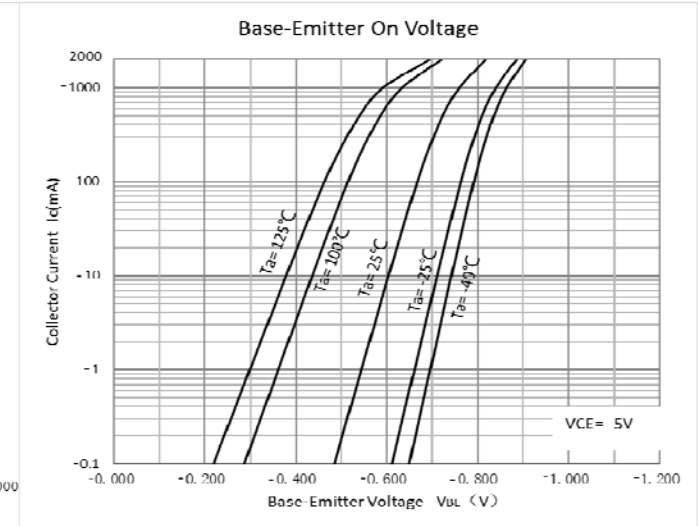


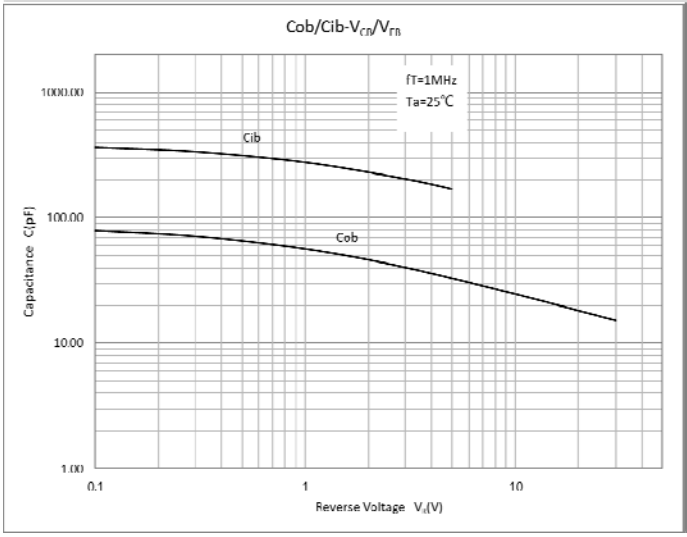
■ Characteristics(Typical)

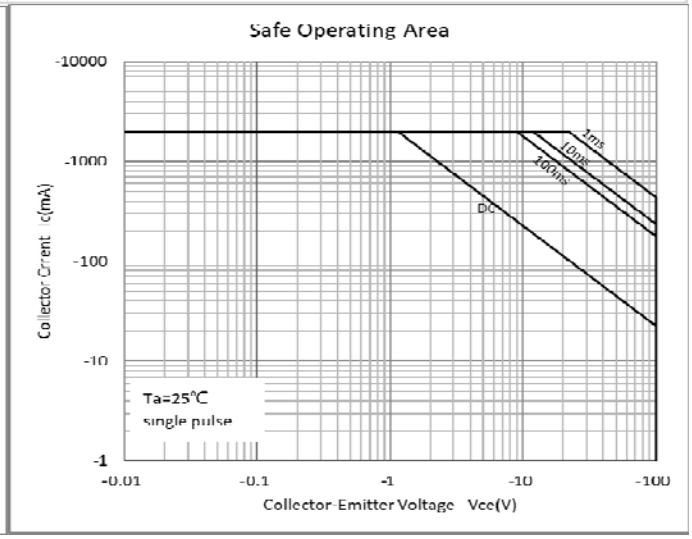




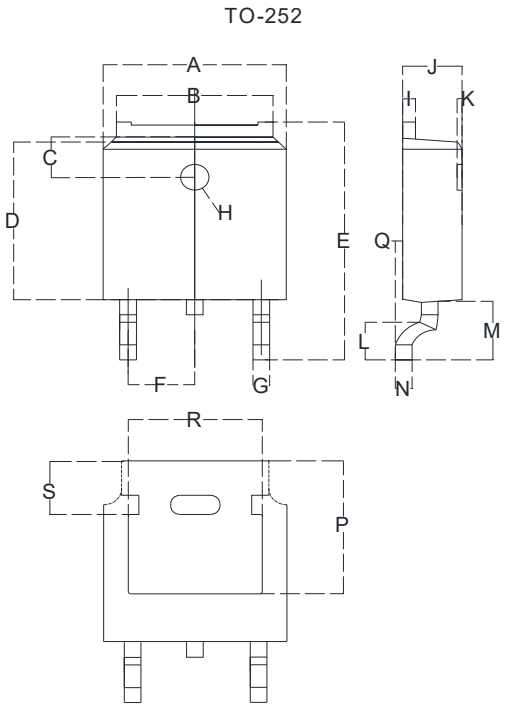








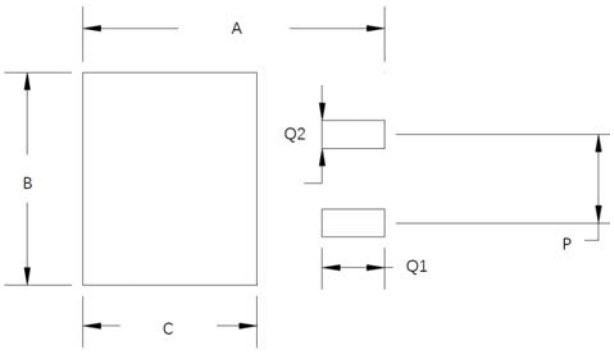
■ TO-252 Package information



Dimensions in millimeters

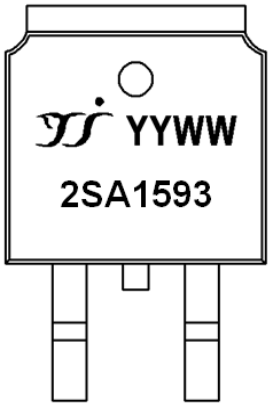
TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	Φ1.050	Φ1.350
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580
P	5.15	5.45
Q	0	0.2
R	4.50	5.10
S	1.60	2.40

■ Suggested Pad Layout



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52

■ Marking Code



YangJie LOGO
YYWW：YY, years; WW , week.
For example,24 represents 2024; 01 represents the first week of this year.
2SA1593: Product model.

Disclaimer

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