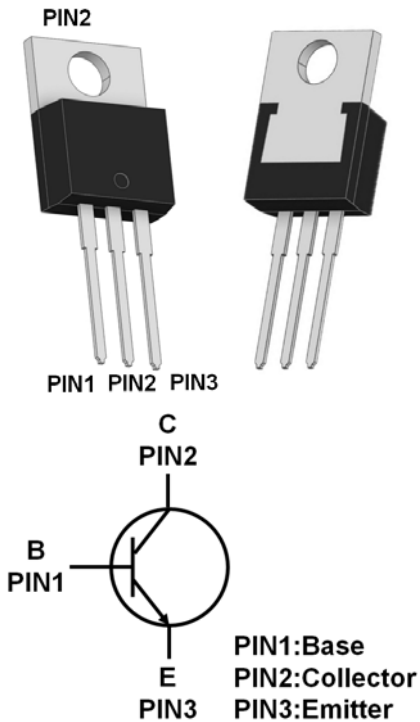


## NPN Silicon Power Transistors



### Features

- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free

### Applications

- Complement to 2N6042
- High switching speed

### Mechanical Data

- Package: TO-220AB
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Unit Weight: 1.9g

### ■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Value
Device marking code			2N6045
Collector-base voltage	$V_{CBO}$	V	100
Collector-emitter voltage	$V_{CEO}$	V	100
Emitter-base voltage	$V_{EBO}$	V	5
Collector current	$I_C$	A	8
Power dissipation	$P_D$	W	5
Thermal resistance, junction-to-ambient (Note1)	$R_{thJA}$	°C/W	25
Junction temperature	$T_j$	°C	-55 to +150
Storage temperature	$T_{STG}$	°C	-55 to +150

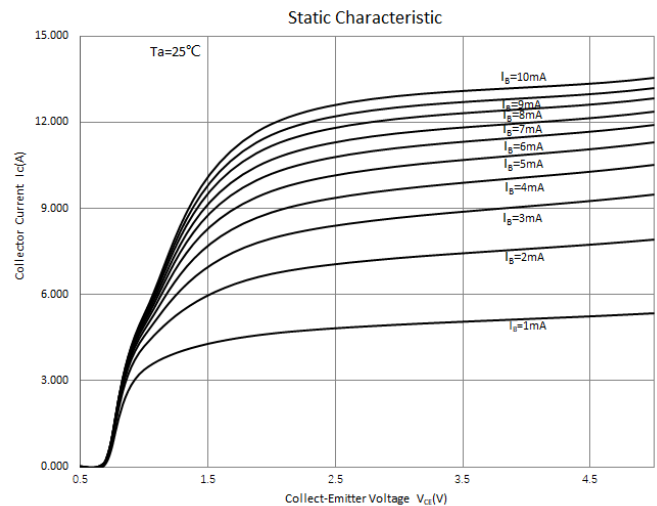
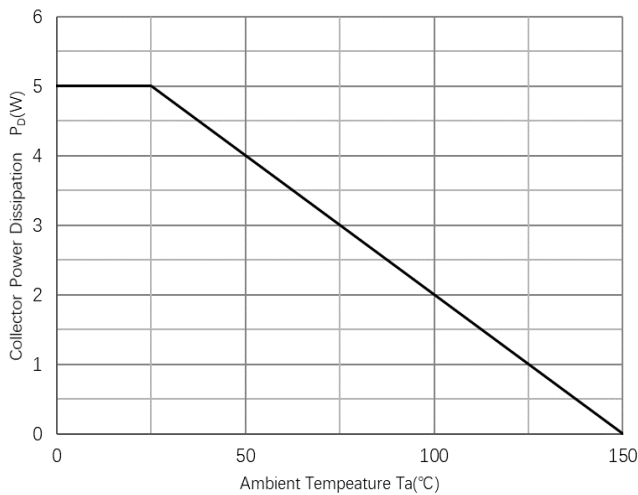
Note1: Device mounted on PCB with minimum recommended pad layout and additional heat sink (25mm x 23mm x 15mm) attached.



■ Electrical Characteristics (Ta=25°C unless otherwise noted)

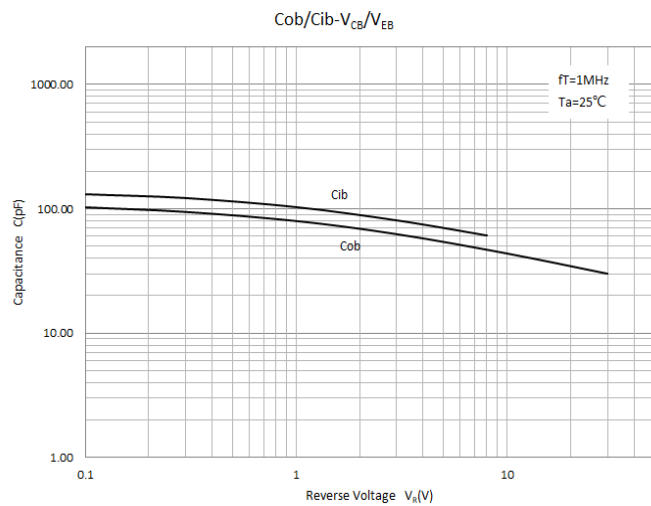
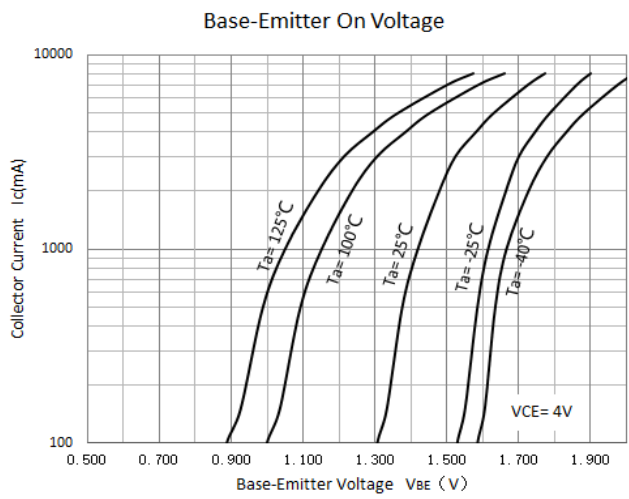
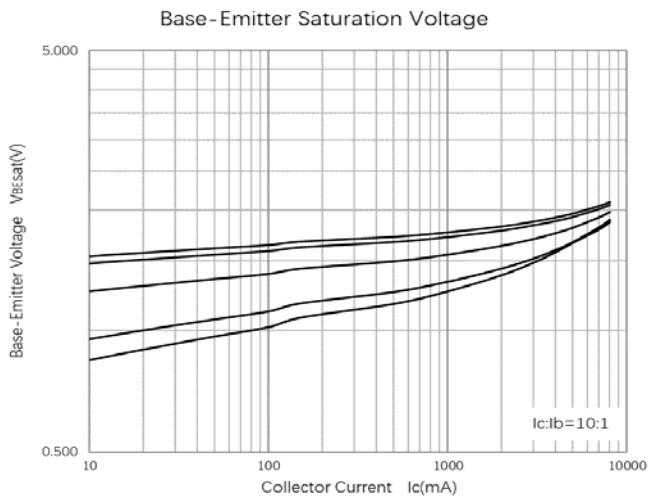
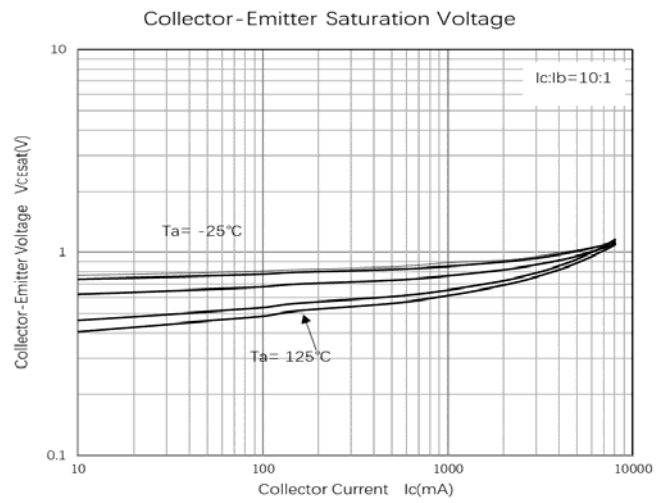
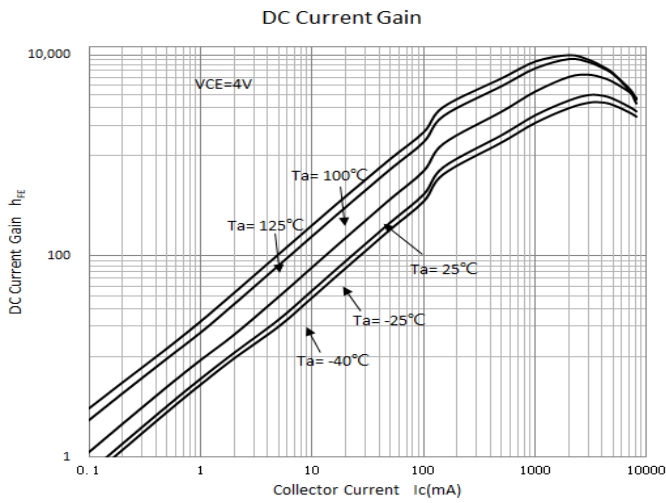
Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C = 100\mu A, I_E = 0$	100		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C = 1mA, I_B = 0$	100		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E = 1mA, I_C = 0$	5		
Collector-base cut-off current	$I_{CBO}$	$\mu A$	$V_{CB} = 100V$			20
Collector cutoff current	$I_{CEO}$	$\mu A$	$V_{CE} = 100V$			20
Emitter-base cut-off current	$I_{EBO}$	mA	$V_{EB} = 5V$			2.0
DC current gain	$h_{FE}$		$V_{CE} = 4V, I_C = 3A$	1000		20000
			$V_{CE} = 4V, I_C = 8A$	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = 3A, I_B = 12mA$			2.0
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C = 8A, I_B = 80mA$			4.5
Base-Emitter Voltage	$V_{BE(on)}$	V	$V_{CE} = 4V, I_C = 4A$			2.8
Collector-base output capacitance	Cob	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$		200	

■ Characteristics(Typical)





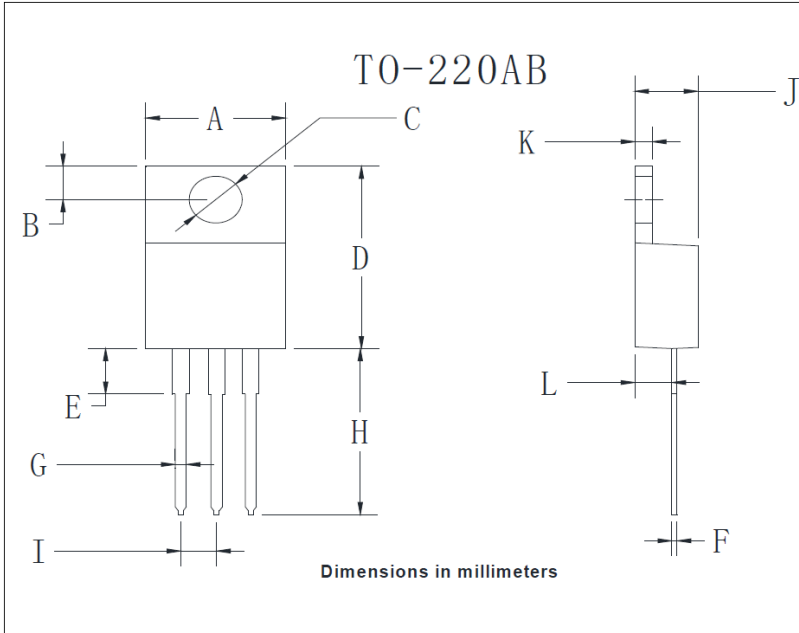
■ Characteristics(Typical)



### ■ Ordering Information (Example)

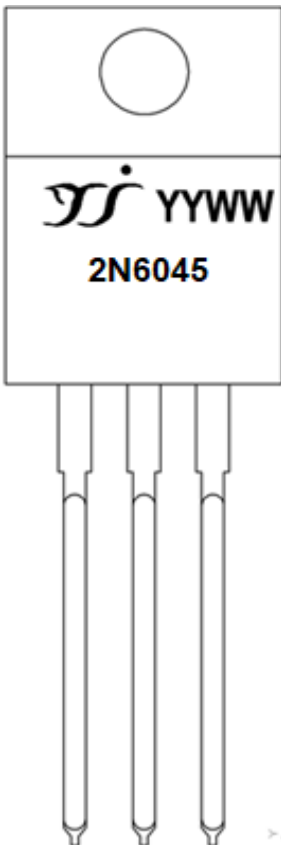
PREFERED P/N	PACKING CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
2N6045	B1	50/Tube	1000	2000	Tube

### ■ TO-220AB Package information



TO-220AB		
Dim	Min	Max
A	9.95	10.35
B	2.55	2.95
C	3.8	4.0
D	14.95	15.25
E	3.75	4.25
F	0.26	0.5
G	0.68	0.94
H	13.4	13.9
I	2.35	2.65
J	4.38	4.78
K	1.14	1.4
L	2.37	2.79

### ■ Marking code



Yangjie LOGO  
 YYWW: YY, years; WW, week.  
 For example, 24 represents 2024; 01 represents the first week of this year.  
 2N6045: Product model.



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