

TO-220CB Plastic-Encapsulate Transistors

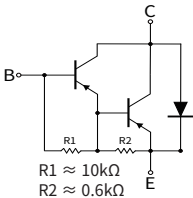
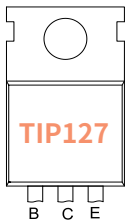
Features

- Complementary to TIP122
- Darlington Amplifier

Mechanical Data

- Case: TO-220CB
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant,halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram



Collector-Emitter Voltage
VCEO -100V
Collector Current
-5 Ampere



Ordering Information

PACKAGE	UNIT WEIGHT(g)	TUBE(pcs)	BOX(pcs)
TO-220CB	2.04	50	1000

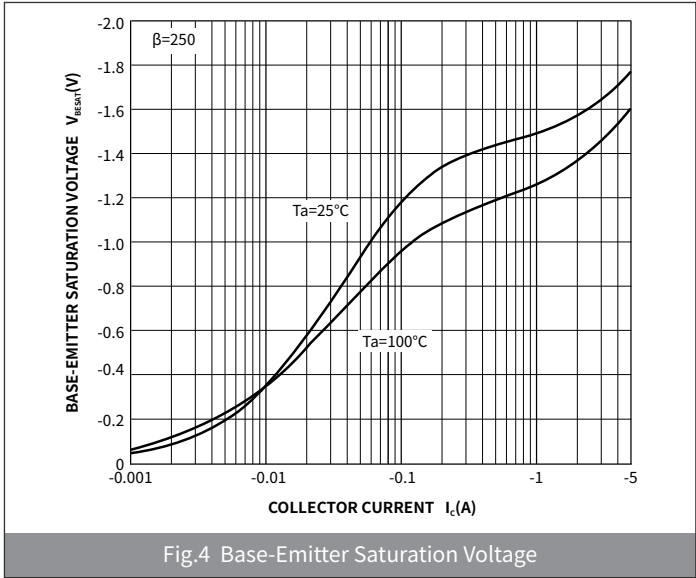
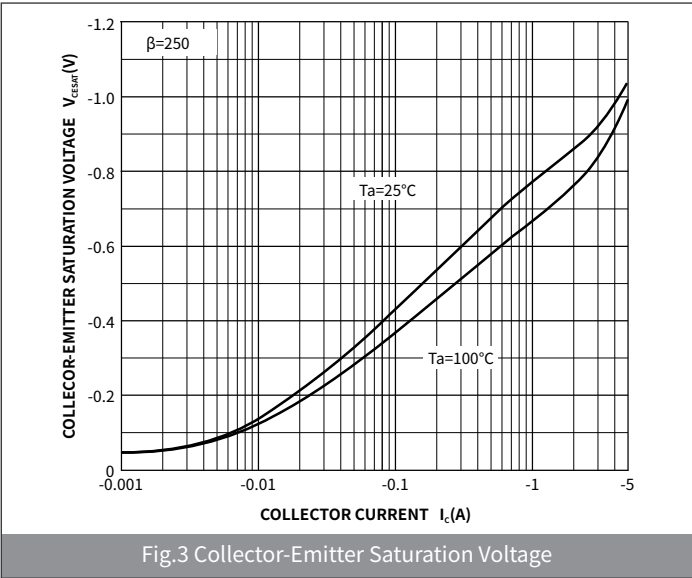
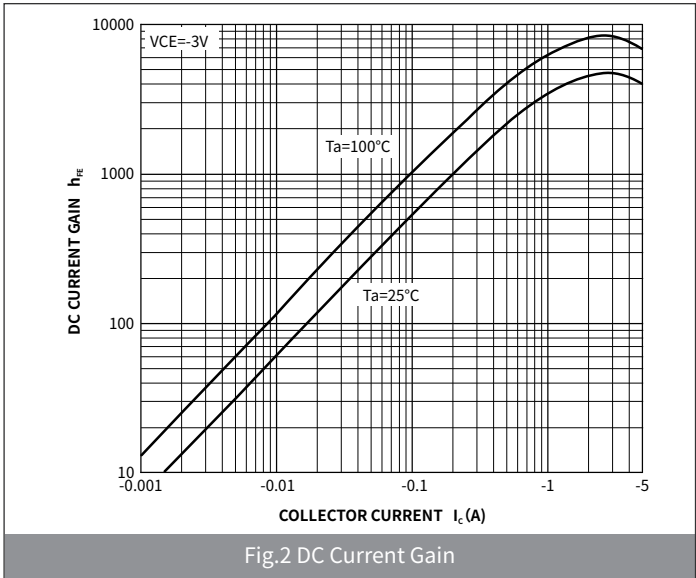
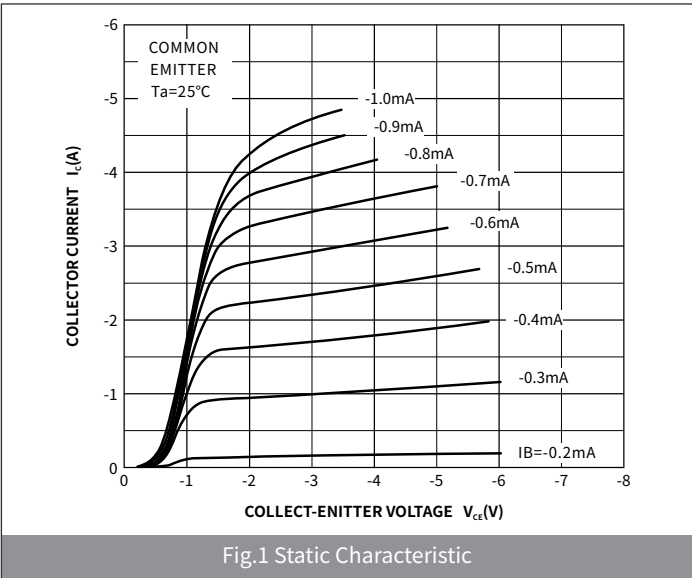
Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Collector-Base Voltage	V _{CBO}	V	-100
Collector-Emitter Voltage	V _{CEO}		-100
Emitter-Base Voltage	V _{EBO}		-5
Collector Current	I _C	A	-5
Collector Power Dissipation	P _C	W	2
Storage temperature	T _{stg}	°C	-55 ~+150
Junction temperature	T _j	°C	-55 ~+150

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Max
Collector-Emitter Sustaining Voltage	$V_{CE(sus)}$	V	$I_C=-100mA, I_B=0$	-100	—
Collector-Base cut-off current	I_{CBO}	mA	$V_{CB}=-100V, I_E=0$	—	-1
Collector-Emitter cut-off current	I_{CEO}		$V_{CB}=-50V, I_E=0$	—	-2
Emitter-Base cut-off current	I_{EBO}		$V_{EB}=-5.0V, I_C=0$	—	-2
DC Current Gain	h_{FE}	—	$I_C=-0.5A, V_{CE}=-3.0V$	1000	—
			$I_C=-3.0A, V_{CE}=-3.0V$	1000	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=-3.0A, I_B=-12mA$	—	-2
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		$I_C=-5.0A, I_B=-20mA$	—	-4
Base-Emitter On Voltage	$V_{BE(on)}$		$V_{CE}=-3.0V, I_C=-3.0A$	—	-2.5
Output Capaciance	C_{ob}	pF	$V_{CB}=-10V, I_E=0, f=0.1MHz$	—	300

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



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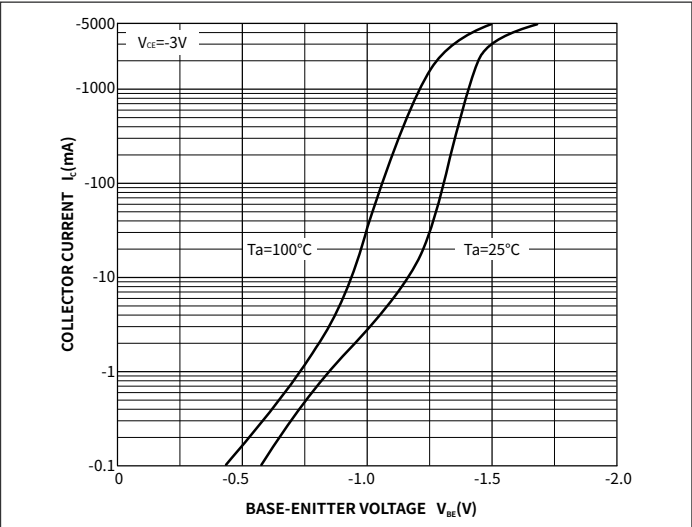


Fig.5 Base-Emitter On Voltage

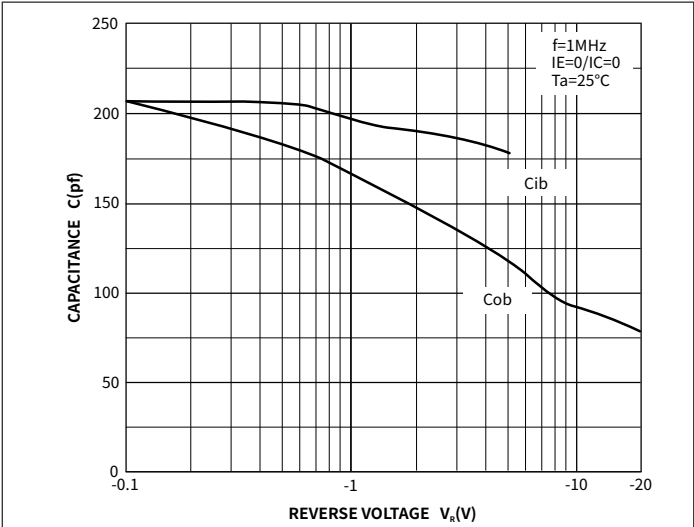
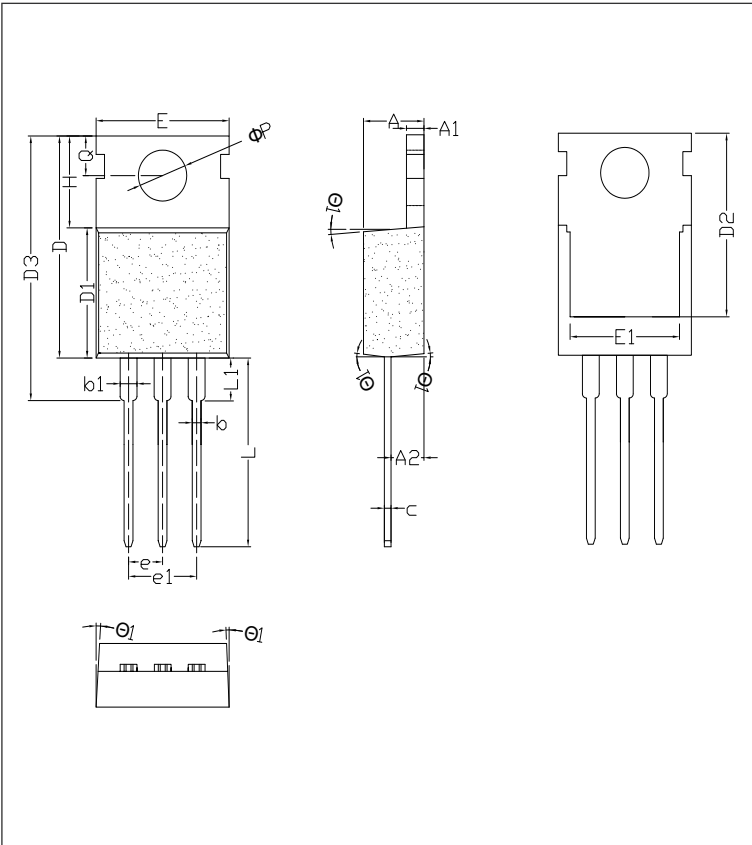


Fig.6 Cob/Cib-VcbVbe

● Package Outline Dimensions (TO-220CB)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	4.40	4.60	0.173	0.181
A1	1.17	1.37	0.046	0.054
A2	2.30	2.50	0.091	0.098
b	0.70	0.90	0.028	0.035
b1	1.25	1.42	0.049	0.056
c	0.45	0.55	0.018	0.022
D	15.50	16.00	0.610	0.630
D1	8.50	8.90	0.335	0.350
D2	12.90	13.30	0.508	0.524
D3	15.45	16.15	0.608	0.636
E	9.90	10.20	0.390	0.402
E1	7.50	8.20	0.295	0.323
e	2.54BSC		0.100 BSC	
e1	5.08BSC		2.000 BSC	
H	6.40	6.60	0.252	0.260
L	13.00	14.00	0.512	0.551
L1	3.80	4.20	0.150	0.165
L2	4.50	4.80	0.177	0.189
ΦP	3.75	3.95	0.148	0.156
Q	2.65	2.85	0.104	0.112
θ1	2°	7°	2°	7°