

TO-126 Plastic-Encapsulate Transistors

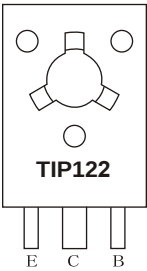
TIP122

DARLINGTON TRANSISTOR (NPN)

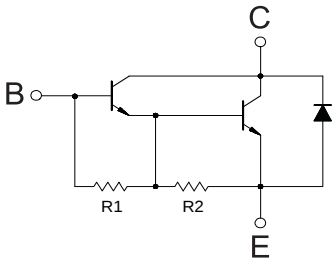
FEATURES

- Medium Power Complementary Silicon Transistors

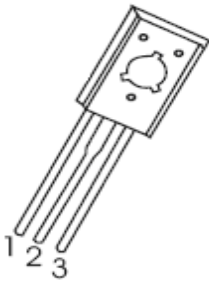
MARKING



Equivalent Circuit



TO-126



- 1. EMITTER
- 2.COLLECTOR
- 3. BASE

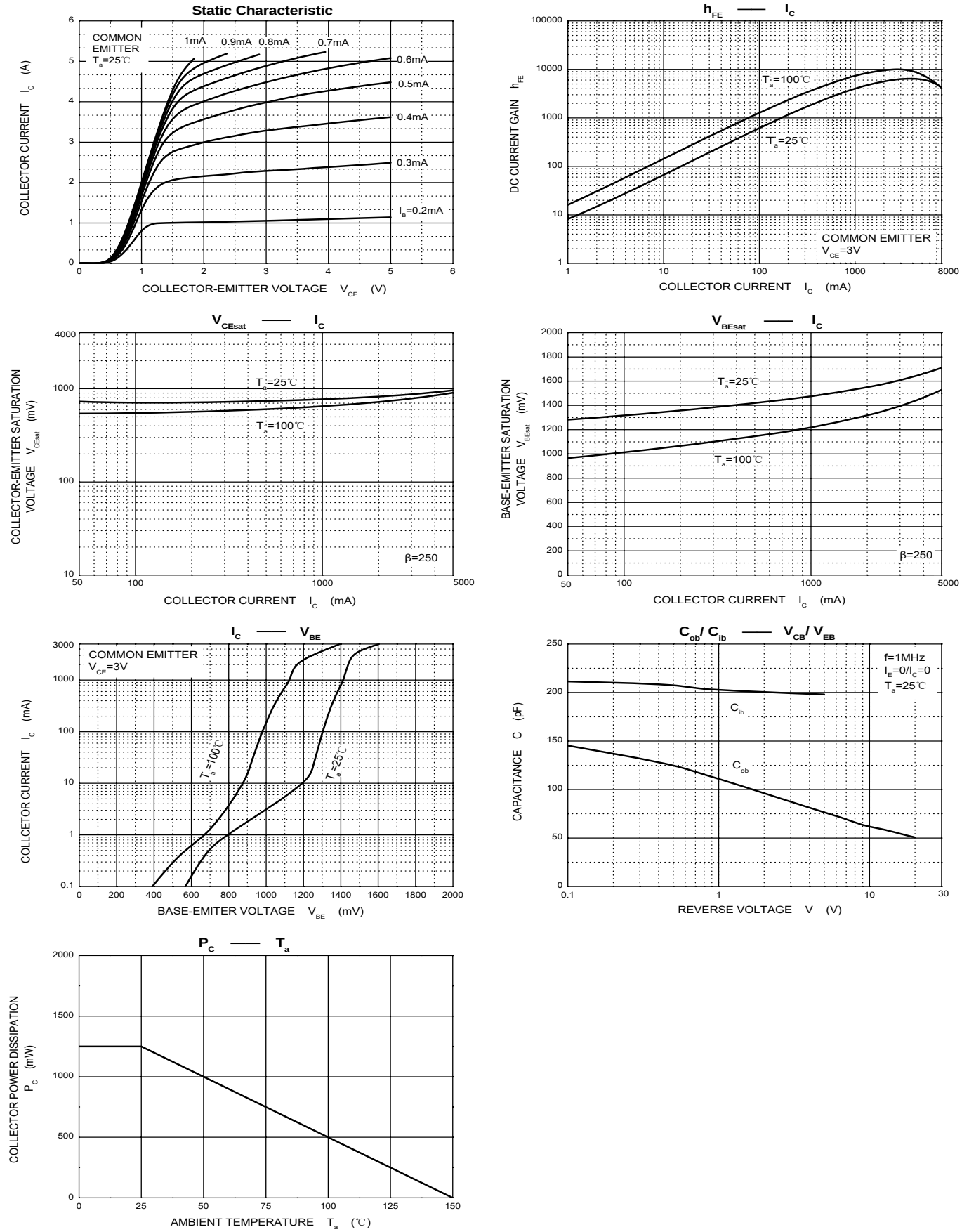
MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	100	V
V _{CEO}	Collector-Emitter Voltage	100	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	5	A
P _C	Collector Power Dissipation	1.25	W
R _{θJA}	Thermal Resistance, Junction to Ambient	100	°C/W
R _{θJC}	Thermal Resistance, Junction to Case	8.33	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

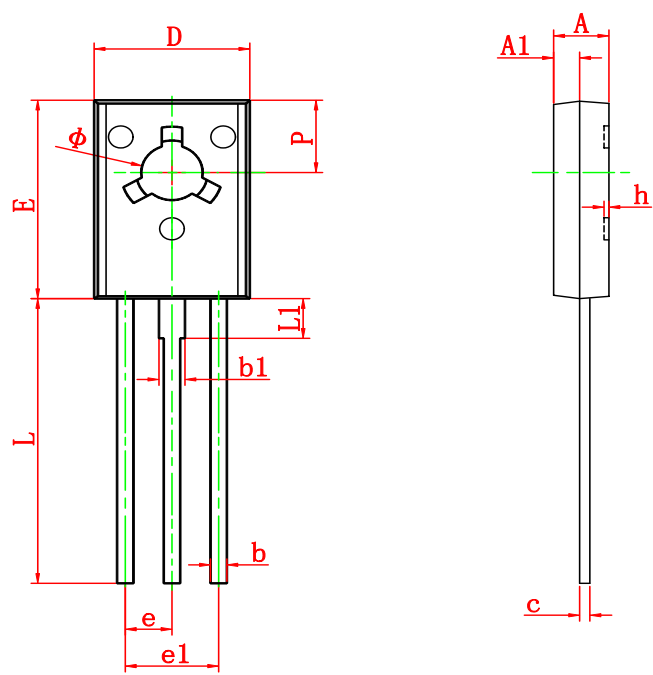
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =1mA, I _E =0	100		V
Collector-emitter breakdown voltage	V _{CEO(SUS)}	I _C =30mA, I _B =0	100		V
Collector cut-off current	I _{CBO}	V _{CB} =100V, I _E =0		0.2	mA
Collector cut-off current	I _{CEO}	V _{CE} =50 V, I _B =0		0.5	mA
Emitter cut-off current	I _{EBO}	V _{EB} =5 V, I _C =0		2	mA
DC current gain	h _{FE(1)}	V _{CE} = 3V, I _C =0.5A	1000		
	h _{FE(2)}	V _{CE} = 3V, I _C =3 A	1000	12000	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =3A, I _B =12mA		2	V
		I _C =5 A, I _B =20mA		4	
Base-emitter voltage	V _{BE}	V _{CE} =3V, I _C =3 A		2.5	V
Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=0.1MHz		200	pF

Typical Characteristics



Package Outline Dimensions (TO-126)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290 TYP		0.090 TYP	
e1	4.480	4.680	0.176	0.184
h	0.000	0.300	0.000	0.012
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
φ	3.000	3.200	0.118	0.126