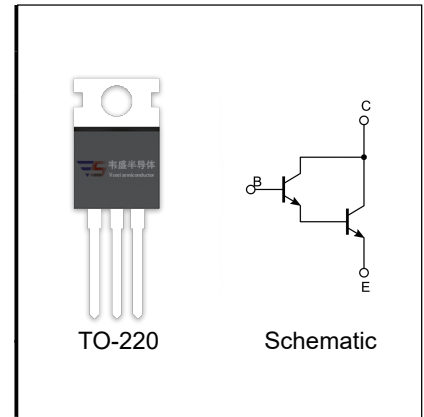


TIP122 DARLINGTON TRANSISTOR (NPN)

FEATURES

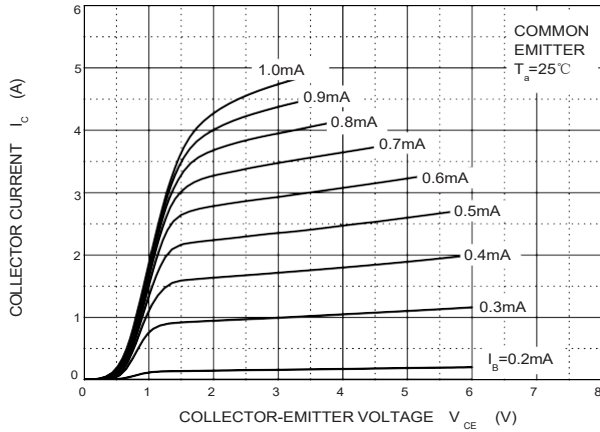
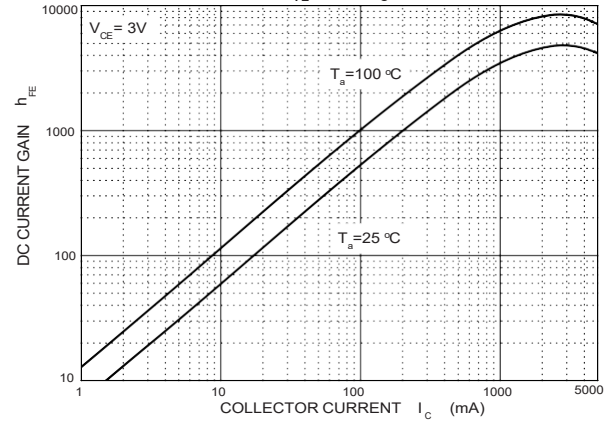
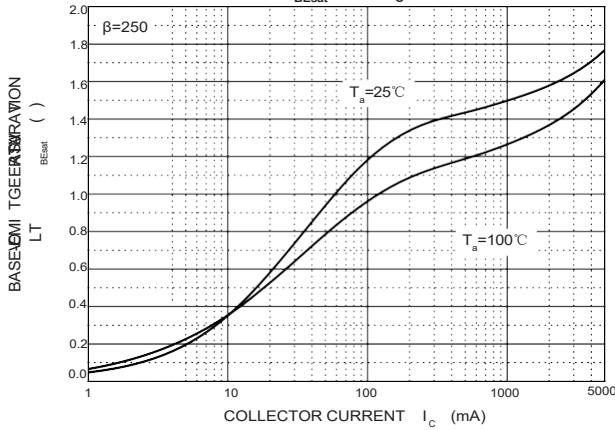
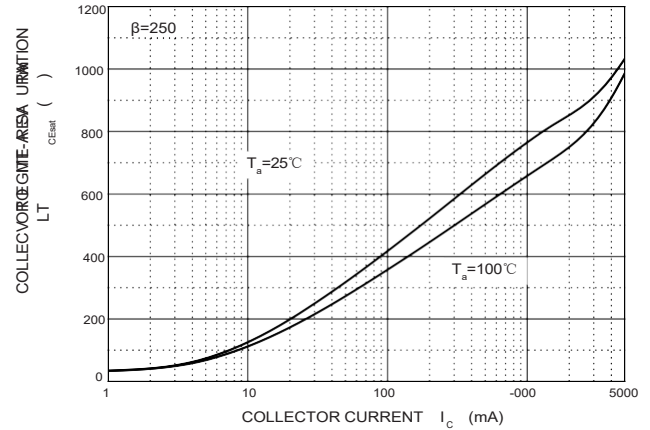
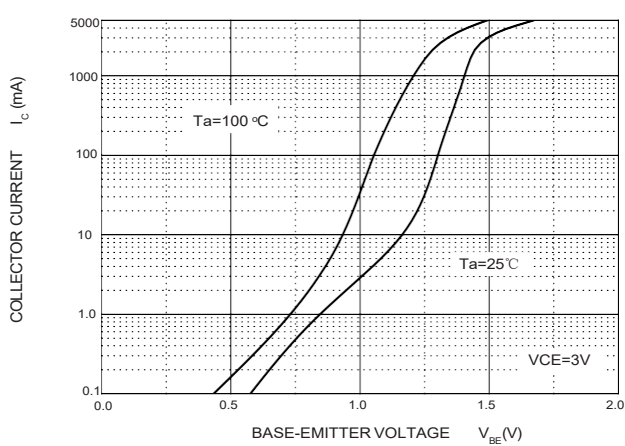
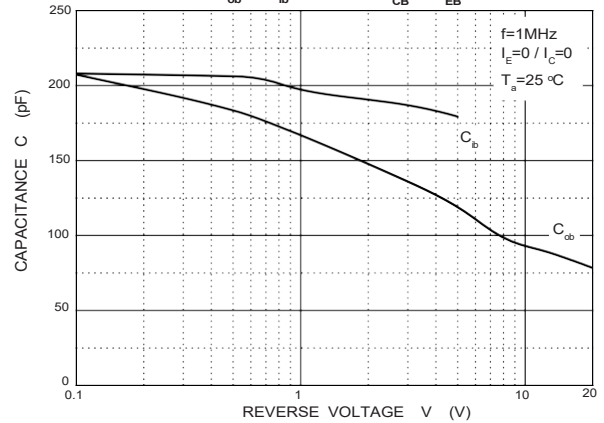
- Medium Power Complementary Silicon Transistors



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	2	W
R _{θJA}	Thermal Resistance, Junction to Ambient	62.5	°C/W
R _{θJC}	Thermal Resistance, Junction to Case	1.92	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	100		V
Collector-emitter breakdown voltage	$V_{CEO(SUS)}$	$I_C = 30\text{mA}, I_B = 0$	100		V
Collector cut-off current	I_{CBO}	$V_{CB} = 100\text{V}, I_E = 0$		0.2	mA
Collector cut-off current	I_{CEO}	$V_{CE} = 50\text{V}, I_B = 0$		0.5	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$		2	mA
DC current gain	$h_{FE(1)}$	$V_{CE} = 3\text{V}, I_C = 0.5\text{A}$	1000		
	$h_{FE(2)}$	$V_{CE} = 3\text{V}, I_C = 3\text{A}$	1000	12000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3\text{A}, I_B = 12\text{mA}$ $I_C = 5\text{A}, I_B = 20\text{mA}$		2 4	V
Base-emitter voltage	V_{BE}	$V_{CE} = 3\text{V}, I_C = 3\text{A}$		2.5	V
Output Capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 0.1\text{MHz}$		200	pF

Static Characteristic

 h_{FE} — I_C

 V_{BEsat} — I_C

 V_{CEsat} — I_C

 I_C — V_{BE}

 C_{ob} / C_{ib} — V_{CB} / V_{EB}

 P_c — T_a
