

MPSA29 NPN Silicon Epitaxial Planar Transistor

Darlington transistor



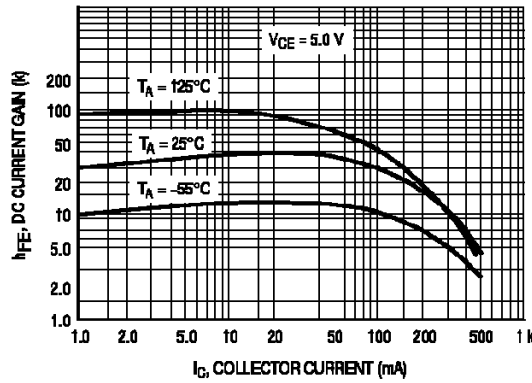
1. Emitter 2. Base 3. Collector
TO-92 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

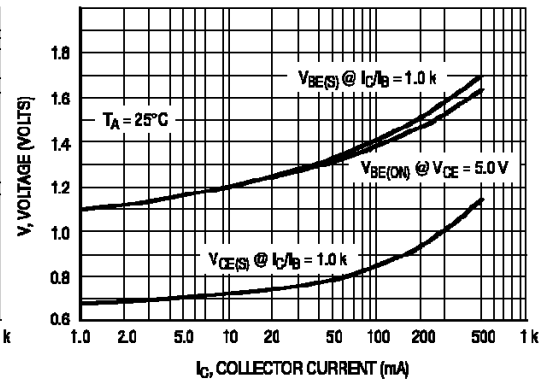
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CES}	100	V
Emitter Base Voltage	V_{EBO}	12	V
Collector Current	I_C	500	mA
Power Dissipation	P_{tot}	625	mW
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

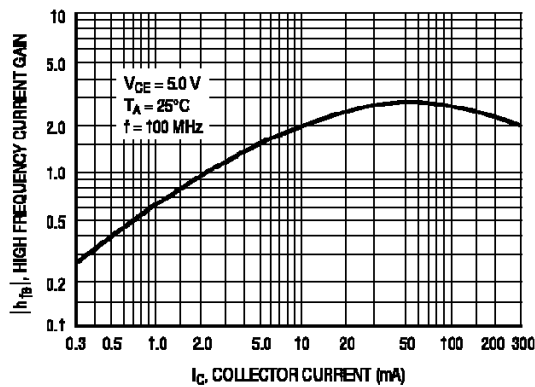
Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $V_{CE} = 5\text{ V}, I_C = 10\text{ mA}$ at $V_{CE} = 5\text{ V}, I_C = 100\text{ mA}$	h_{FE} h_{FE}	10000 10000	- -	- -
Collector Base Cutoff Current at $V_{CB} = 80\text{ V}$	I_{CBO}	-	100	nA
Collector Emitter Cutoff Current at $V_{CE} = 80\text{ V}$	I_{CES}	-	500	nA
Emitter Base Cutoff Current at $V_{EB} = 10\text{ V}$	I_{EBO}	-	100	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	100	-	V
Collector Emitter Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CES}$	100	-	V
Emitter Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	12	-	V
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}, I_B = 0.01\text{ mA}$ at $I_C = 100\text{ mA}, I_B = 0.1\text{ mA}$	$V_{CE(sat)}$	- -	1.2 1.5	V
Base Emitter On Voltage at $I_C = 100\text{ mA}, V_{CE} = 5\text{ V}$	$V_{BE(on)}$	-	2	V
Current Gain Bandwidth Product at $V_{CE} = 5\text{ V}, I_C = 10\text{ mA}, f = 100\text{ MHz}$	f_T	125	-	MHz
Output Capacitance at $V_{CB} = 10\text{ V}, f = 1\text{ MHz}$	C_{obo}	-	8	pF



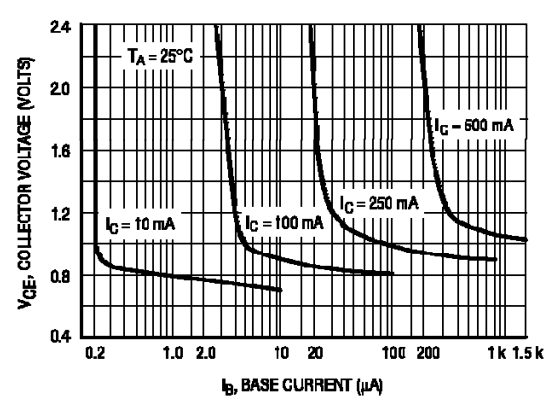
DC Current Gain



"ON" Voltages



High Frequency Current Gain



Collector Saturation Region