

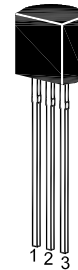
MPSA13 / 14

NPN Silicon Epitaxial Planar Transistors

for general purpose applications, darlington transistor.

The transistor is subdivided into one group according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.



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

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	30	V
Collector Emitter Voltage	V_{CES}	30	V
Emitter Base Voltage	V_{EBO}	10	V
Collector Current	I_C	500	mA
Power Dissipation	P_{tot}	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit	
DC Current Gain at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	MPSA13	h_{FE}	5000	-	
	MPSA14	h_{FE}	10000	-	
	at $V_{CE} = 5\text{ V}$, $I_C = 100\text{ mA}$	MPSA13	h_{FE}	10000	-
		MPSA14	h_{FE}	20000	-
Collector Base Cutoff Current at $V_{CB} = 30\text{ V}$	I_{CBO}	-	100	nA	
Emitter Base Cutoff Current at $V_{EB} = 10\text{ V}$	I_{EBO}	-	100	nA	
Collector Emitter Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CES}$	30	-	V	
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 0.1\text{ mA}$	$V_{CE(sat)}$	-	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	

