

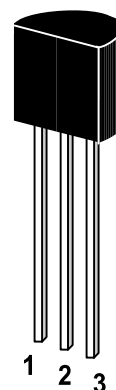
# MPSA13 / 14

## 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

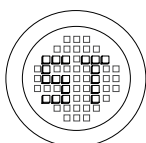
TO-92 Plastic Package

Weight approx. 0.18g

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

	Symbol	Value	Unit
Collector Emitter Voltage	$V_{CES}$	30	V
Collector Base Voltage	$V_{CBO}$	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	$T_s$	-55 to +150	$^\circ\text{C}$

G S P FORM A IS AVAILABLE



®

**РАДИОТЕХ**

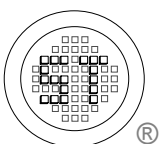
Тел.: (495) 795-0805  
Факс: (495) 234-1603  
Эл. почта: [info@rct.ru](mailto:info@rct.ru)  
Веб: [www.rct.ru](http://www.rct.ru)

# MPSA13 / 14

## Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

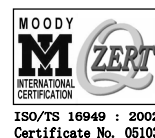
	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE}=5\text{V}$ , $I_C=10\text{mA}$	MPSA13	$h_{FE}$	5000	-	-	
	MPSA14	$h_{FE}$	10000	-	-	
	at $V_{CE}=5\text{V}$ , $I_C=100\text{mA}$	MPSA13	$h_{FE}$	10000	-	-
		MPSA14	$h_{FE}$	20000	-	-
Collector Emitter Breakdown Voltage at $I_C=100\text{ }\mu\text{A}$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

**G S P FORM A IS AVAILABLE**



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001  
Certificate No. 7116



ISO 9001 : 2000  
Certificate No. 0508-1999-01-002-001

Dated : 07/12/2002