

## Feature:

- NPN Silicon Planar Epitaxial RF Transistor

## Pin Configuration:

1. Collector
2. Base
3. Emitter

## Absolute Maximum Ratings

Parameters	Symbol	Value	Units
Collector Emitter Voltage	$V_{CEO}$	80	V
Collector Base Voltage	$V_{CBO}$		
Emitter Base Voltage	$V_{EBO}$	4	
Collector Current Continuous	$I_C$	500	mA
Power Dissipation at $T_a = 25^\circ\text{C}$ Derate Above $25^\circ\text{C}$	$P_D$	625	mW
Power Dissipation at $T_C = 25^\circ\text{C}$ Derate Above $25^\circ\text{C}$		5	mW/ $^\circ\text{C}$
		1.5	W
		12	mW/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	$T_j, T_{stg}$	-55 to +150	$^\circ\text{C}$

## Thermal Resistance

Junction to Ambient	$R_{th(j-a)} (1)$	200	$^\circ\text{C}/\text{mW}$
Junction to Case	$R_{th(j-c)}$	83.3	

## Electrical Characteristics ( $T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameters	Symbol	Test Condition	Min.	Max.	Units
Collector Emitter Voltage	$V_{CEO}^*$	$I_C = 1\text{mA}, I_B = 0$	80	-	V
Emitter-Base Voltage	$V_{EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	4	-	
Collector-Cut off Current	$I_{CBO}$	$V_{CB} = 80\text{V}, I_E = 0$	-	0.1	$\mu\text{A}$

## Electrical Characteristics ( $T_a = 25^\circ\text{C}$ unless otherwise specified)

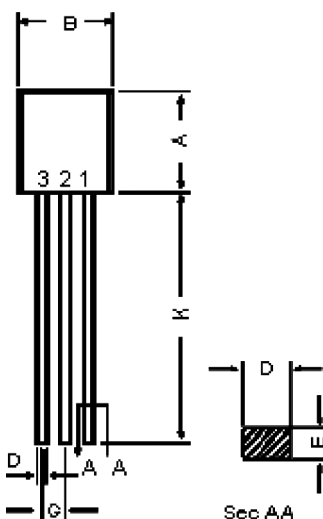
Parameters	Symbol	Test Condition	Min.	Max.	Units
Collector-Cut off Current	$I_{CEO}$	$V_{CE} = 60\text{V}, I_B = 0$	-	0.1	$\mu\text{A}$
Collector-Emitter (sat) Voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$	-	0.25	V
Base-Emitter (on) Voltage	$V_{BE(on)}$	$I_C = 100\text{mA}, V_{CE} = 1\text{V}$	-	1.2	
DC Current Gain	$h_{FE}$	$V_{CE} = 1\text{V}, I_C = 10\text{mA}$ $V_{CE} = 1\text{V}, I_C = 100\text{mA}$	100 100	-	-

## Dynamic Characteristics

Transition Frequency	$f_T^{**}$	$I_C = 10\text{mA}, V_{CE} = 2\text{V}$ $f = 100\text{MHz}$	100	-	MHz
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\*Pulse Test : pulse width  $\leq 300\mu\text{s}$ , duty cycle  $\leq 2\%$ .

\*\*  $f_T$  is defined as the frequency at which  $|h_{fe}|$  extrapolates to unity.



Dimensions	Min.	Max.
A	4.32	5.33
B	4.45	5.2
C	3.18	4.19
D	0.41	0.55
E	0.35	0.5
F	5°	
G	1.14	1.4
H		1.53
K	12.7	-

Dimensions : Millimetres



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### Part Number Table

Description	Part Number
Transistor, NPN, TO-92	MPSA06

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