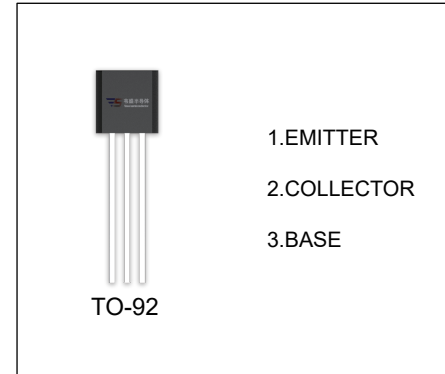


## MPS651 TRANSISTOR (NPN)

### FEATURES

- General Purpose Amplifier



### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
MPS651	TO-92	Bulk	1000pcs/Bag
MPS651-TA	TO-92	Tape	2000pcs/Box

### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	80	V
V <sub>CEO</sub>	Collector-Emitter Voltage	60	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current -Continuous	2	A
P <sub>D</sub>	Collector Power Dissipation	625	mW
R <sub>θJA</sub>	Thermal Resistance rom Junction to Ambient	200	°C /W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C

**T =25 °C unless otherwise specified**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.1mA, I_E=0$	80			V
Collector-emitter breakdown	$V_{(BR)CEO}^*$	$I_C=10mA, I_B=0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.01mA, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=80V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=4V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE(1)}^*$	$V_{CE}=2V, I_C=50mA$	75			
	$h_{FE(2)}^*$	$V_{CE}=2V, I_C=500mA$	75			
	$h_{FE(3)}^*$	$V_{CE}=2V, I_C=1A$	75			
	$h_{FE(4)}^*$	$V_{CE}=2V, I_C=2A$	40			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}^*$	$I_C=2A, I_B=200mA$			0.5	V
	$V_{CE(sat)(2)}^*$	$I_C=1A, I_B=100mA$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}^*$	$I_C=1A, I_B=100mA$			1.2	V
Base-emitter voltage	$V_{BE}$	$I_C=1A, V_{CE}=2V$			1	V
Transition frequency	$f_T$	$V_{CE}=5V, I_C=50mA, f=100MHz$	75			MHz

 \*Pulse test: pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2.0\%$ .

