



MPS651

Features

- Halogen free available upon request by adding suffix "-HF"
- Switching and Amplifier Applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Marking Code:MPS651
051

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	60	V
V_{CBO}	Collector-Base Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current, Continuous	2	A
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Thermal Characteristics

Symbol	Rating	Max	Unit
P_D	Total Device Dissipation	625	mW

Electrical Characteristics @ 25°C Unless Otherwise Specified

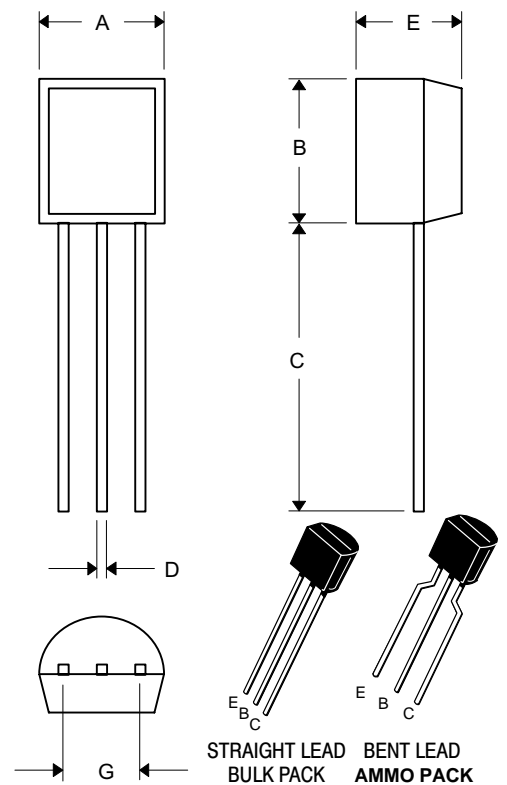
Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* ($I_C=10mA$, $I_B=0$)	60	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=100\mu A$, $I_E=0$)	80	---	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ($I_E=10\mu A$, $I_C=0$)	5.0	---	Vdc
I_{CBO}	Collector Cutoff Current ($V_{CB}=80Vdc$, $I_E=0$)	---	100	nAdc
I_{EBO}	Base Cutoff Current ($V_{EB}=4Vdc$, $I_C=0$)	---	100	nAdc
h_{FE}	DC Current Gain ($V_{CE}=2.0Vdc$, $I_C=50mA$) ($V_{CE}=2.0Vdc$, $I_C=100mA$) ($V_{CE}=2.0Vdc$, $I_C=1Adc$) ($V_{CE}=2.0Vdc$, $I_C=2Adc$)	75 75 75 40		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=2Adc$, $I_B=200mA$) ($I_C=1Adc$, $I_B=100mA$)		0.5 0.3	Vdc Vdc
$V_{BE(sat)}$	Base-Emitter saturation Voltage ($I_C=1Adc$, $I_B=100mA$)		1.2	Vdc
$V_{BE(on)}$	Base-Emitter On Voltage ($I_C=1Adc$, $V_{CE}=2.0Vdc$)		1.0	Vdc
f_T	Transition frequency ($I_C=50mA$, $V_{CE}=5Vdc$, $f=100MHz$)	75		MHz

NPN Encapsulate Transistors

TO-92

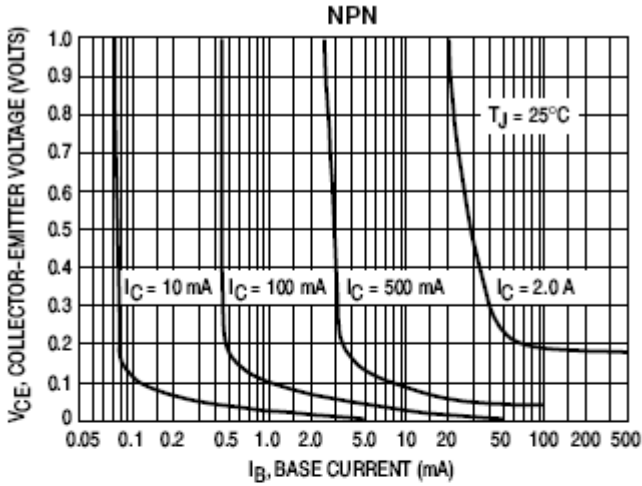


DIMENSIONS

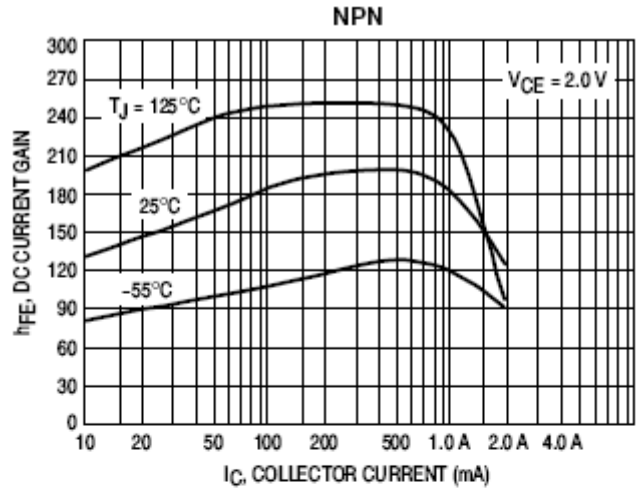
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

* For ammo packing detailed specification, click here to visit our website of product packaging for details.

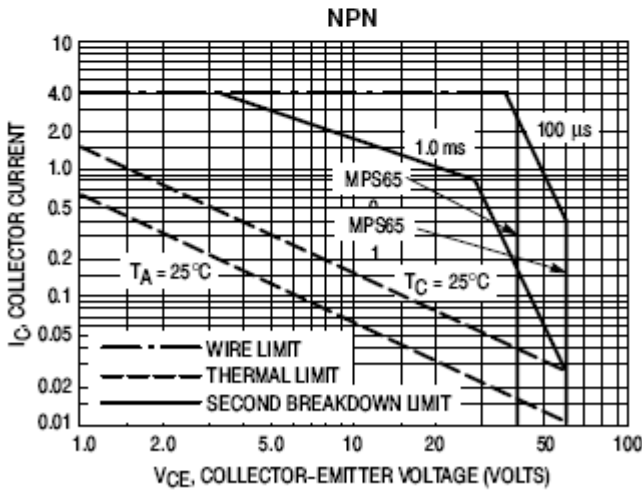
MPS651



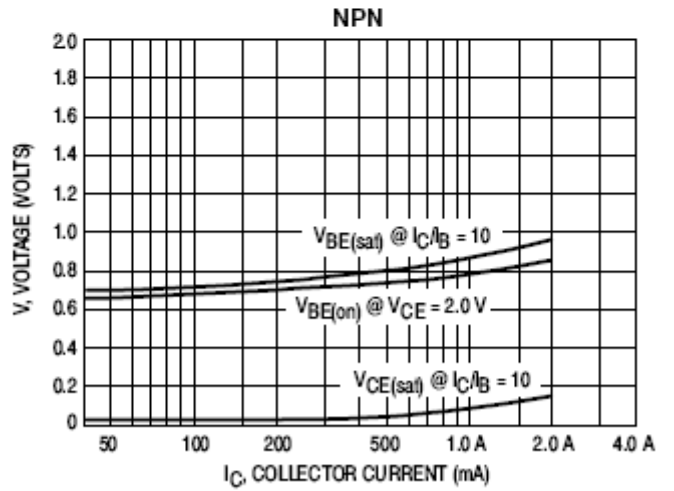
MPS650, MPS651
Collector Saturation Region



MPS650, MPS651
Typical DC Current Gain



MPS650, MPS651 SOA,
Safe Operating Area



MPS650, MPS651
On Voltages



Micro Commercial Components

Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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