



MPS651

Features

- 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

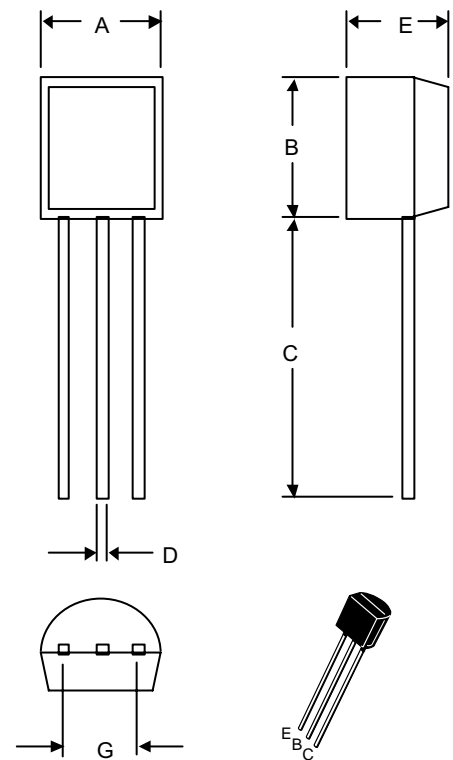
Symbol	Parameter	Min	Max	Units
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OFF CHARACTERISTICS

$V_{(BR)CEO}$	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

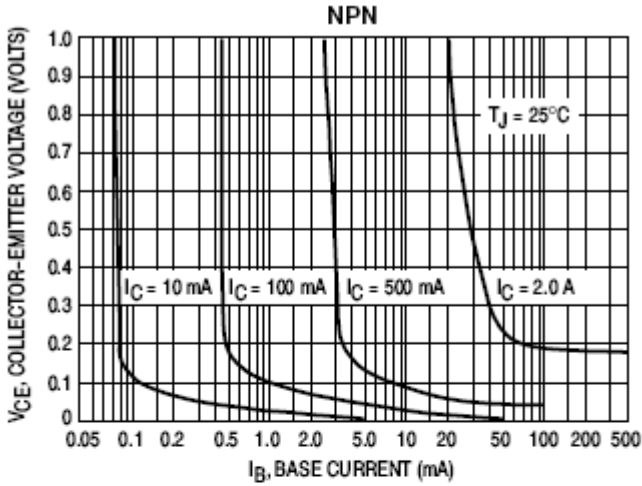
NPN Encapsulate Transistors

TO-92

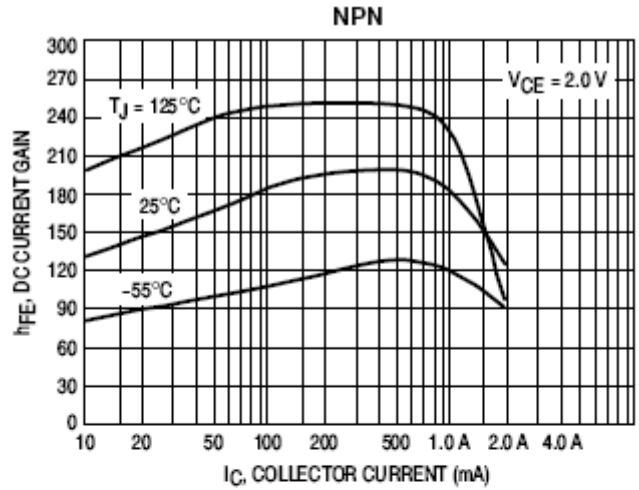


DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.170	.190	4.33	4.83	
B	.170	.190	4.30	4.83	
C	.550	.590	13.97	14.97	
D	.010	.020	0.36	0.56	
E	.130	.160	3.30	3.96	
G	.096	.104	2.44	2.64	

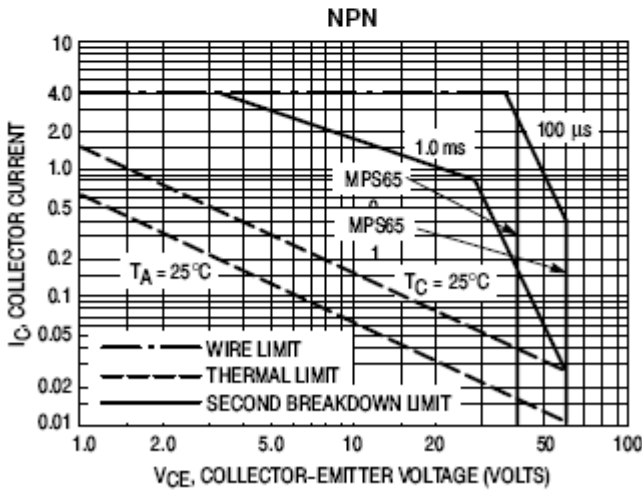
MPS651



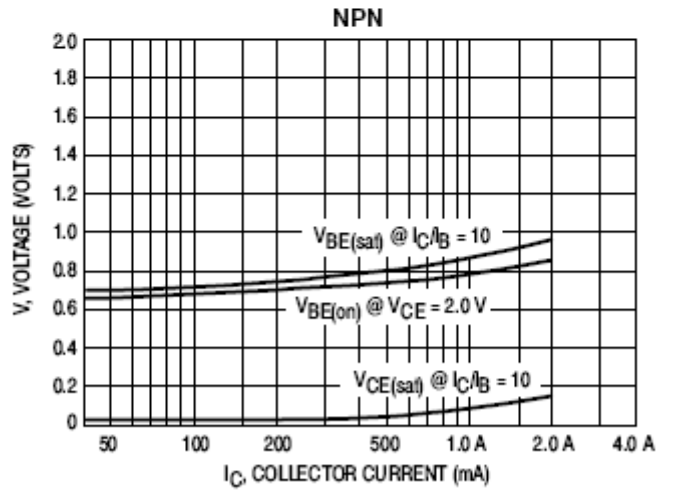
MPS650, MPS651
Collector Saturation Region



MPS650, MPS651
Typical DC Current Gain



MPS650, MPS651 SOA,
Safe Operating Area



MPS650, MPS651
On Voltages



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Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 2Kpcs/Ammo Box
Part Number-BP	Bulk: 100Kpcs/Carton

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