

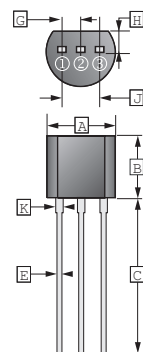
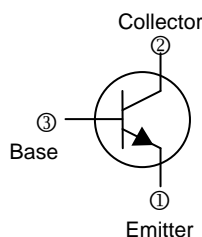
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

Switching and Amplifier Applications

TO-92



REF.	Millimeter	
	Min.	Max.
A	4.40	4.70
B	4.30	4.70
C	12.70	-
D	3.30	3.81
E	0.36	0.56
F	0.36	0.51
G	1.27 TYP.	
H	1.10	-
J	2.42	2.66
K	0.36	0.76

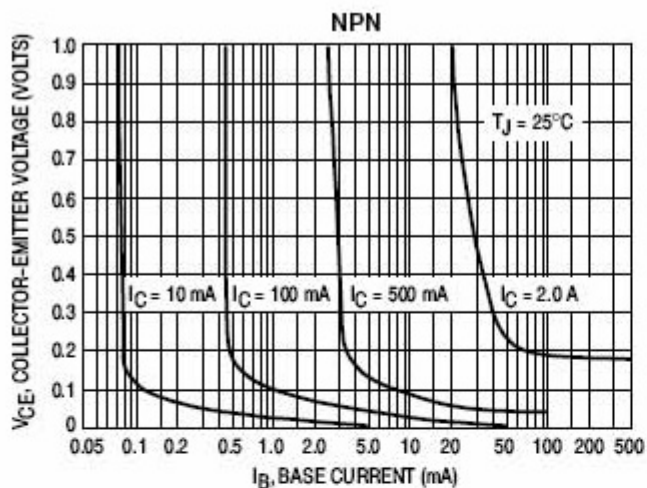
ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector - Base Voltage	V _{CBO}	80	V
Collector - Emitter Voltage	V _{CEO}	60	V
Emitter - Base Voltage	V _{EBO}	5	V
Collector Current - Continuous	I _C	2	A
Collector Dissipation	P _C	0.625	W
Junction, Storage Temperature	T _J , T _{STG}	150, -55~150	°C

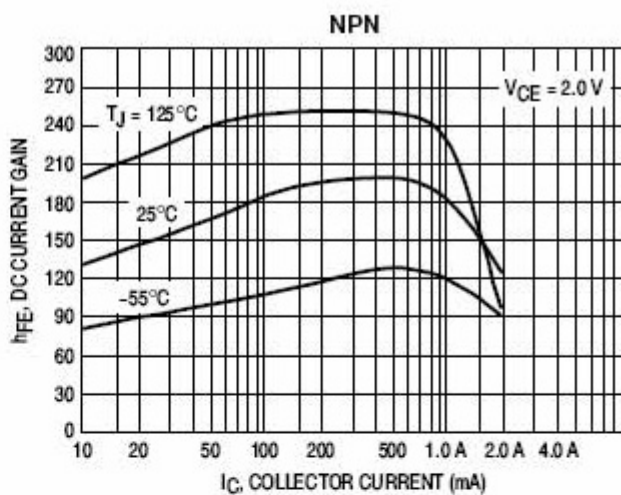
ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	V _{(BR)CBO}	80	-	-	V	I _C =100µA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO} *	60	-	-	V	I _C =10 mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5	-	-	V	I _E =10µA, I _C =0
Collector Cut-Off Current	I _{CBO}	-	-	0.1	µA	V _{CB} =80 V, I _E =0
Emitter Cut-Off Current	I _{EBO}	-	-	0.1	µA	V _{EB} =4 V, I _C =0
DC Current Gain	H _{FE(1)} *	75	-	-		V _{CE} =2V, I _C =50mA
	H _{FE(2)} *	75	-	-		V _{CE} =2V, I _C =500mA
	H _{FE(3)} *	75	-	-		V _{CE} =2V, I _C =1A
	H _{FE(4)} *	40	-	-		V _{CE} =2V, I _C =2A
Collector-Emitter Saturation Voltage	V _{CE(sat)} *	-	-	0.5	V	I _C =2A, I _B =200mA
		-	-	0.3	V	I _C =1A, I _B =100mA
Base-Emitter Saturation Voltage	V _{BE(sat)} *	-	-	1.2	V	I _C =1A, I _B =100mA
Base-Emitter On Voltage	V _{BE(on)} *	-	-	1	V	V _{CE} =2V, I _C =1A
Transition Frequency	f _T	75	-	-	MHz	V _{CE} =5V, I _C =50 mA, f=100 MHz

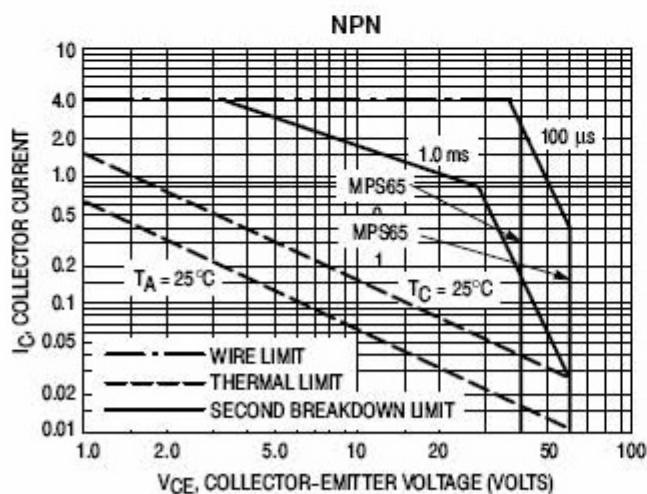
CHARACTERISTIC CURVES



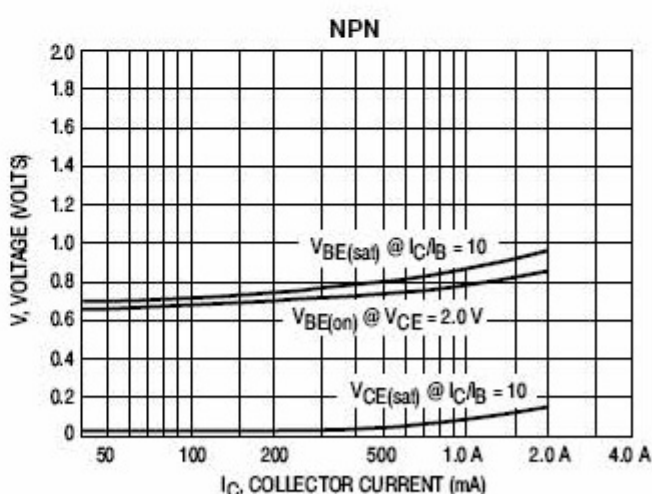
MPS650, MPS651
Collector Saturation Region



MPS650, MPS651
Typical DC Current Gain



MPS650, MPS651 SOA,
Safe Operating Area



MPS650, MPS651
On Voltages