Elektronische Bauelemente

MPSA44

NPN Plastic Encapsulated Transistor

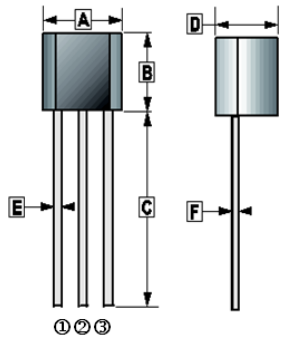
RoHS Compliant Product

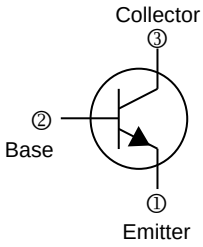
A suffix of “-C” specifies halogen & lead-free

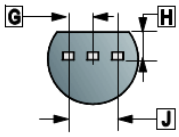
FEATURES

High Voltage NPN Transistor

TO-92







① Emitter
② Base
③ Collector

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.70	F	0.30	0.51
B	4.30	4.70	G	1.27 TYP.	
C	12.70	-	H	1.10	1.40
D	3.30	3.81	J	2.42	2.66
E	0.36	0.56	K	0.36	0.76

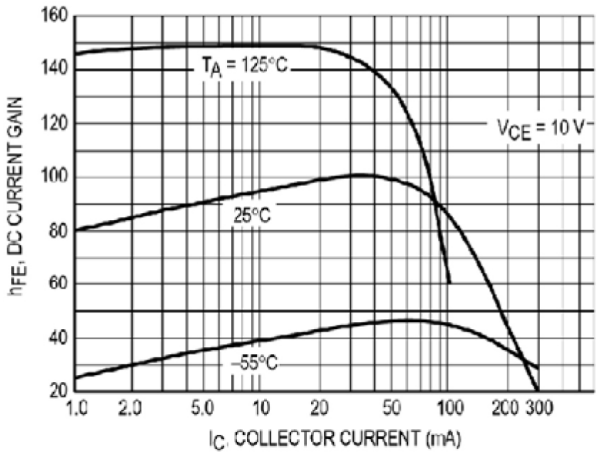
ABSOLUTE MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage Parameter	V_{CBO}	400	V
Collector to Emitter Voltage	V_{CEO}	400	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current - Continuous	I_C	0.3	A
Collector Power Dissipation	P_C	625	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	200	℃/W
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	℃

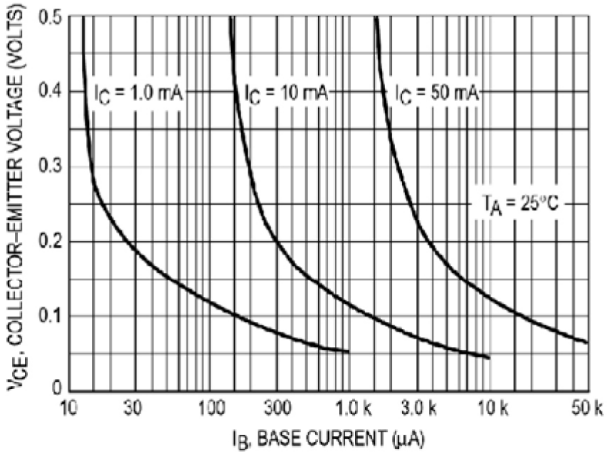
ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	400	-	-	V	I_C=100μA, I_E=0
Collector to Emitter Breakdown Voltage[1]	$V_{(BR)CEO}$	400	-	-	V	I_C=1mA, I_B=0
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	6	-	-	V	I_E=100μA, I_C=0
Collector Cut-Off Current	I_{CBO}	-	-	0.1	μA	V_{CB}=400 V, I_E=0
Emitter Cut-Off Current	I_{EBO}	-	-	0.1	μA	V_{EB}=4V, I_C=0
DC Current Gain	$h_{FE(1)}$	40	-	-		V_{CE}=10V, I_C=1mA
	$h_{FE(2)}$	50	-	200		V_{CE}=10V, I_C=10mA
	$h_{FE(3)}$	45	-	-		V_{CE}=10V, I_C=50mA
	$h_{FE(4)}$	40	-	-		V_{CE}=10V, I_C=100mA
Collector to Emitter Saturation Voltage	$V_{CE(sat)(1)}$	-	-	0.4	V	I_C=1mA, I_B=0.1mA
	$V_{CE(sat)(2)}$	-	-	0.5		I_C=10mA, I_B=1mA
Base to Emitter Voltage	$V_{BE(sat)}$	-	-	0.75	V	I_C=10mA, I_B=1mA
	f_T	50	-	-	MHz	V_{CE} =20V, I_C=10mA, f=30MHz

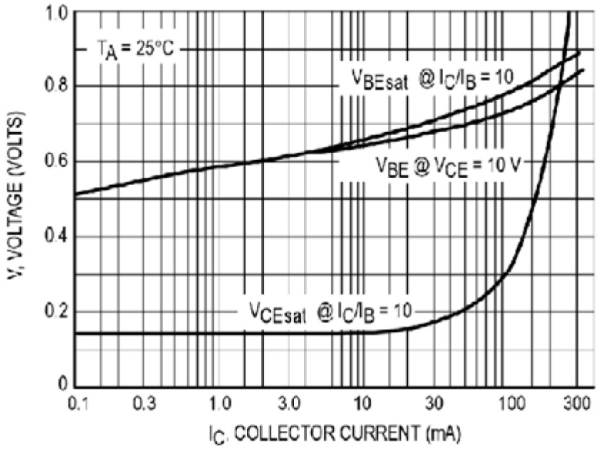
CHARACTERISTIC CURVES



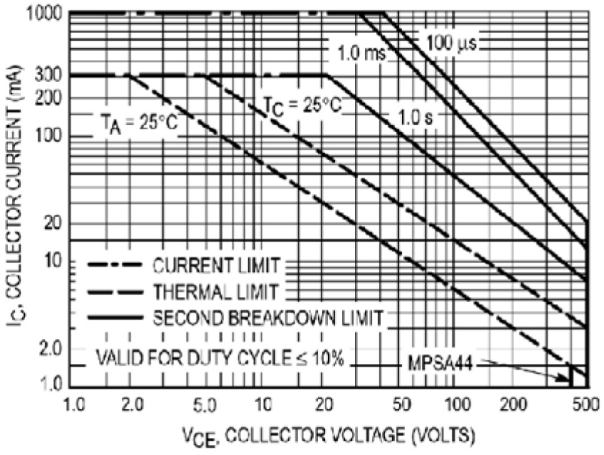
DC Current Gain



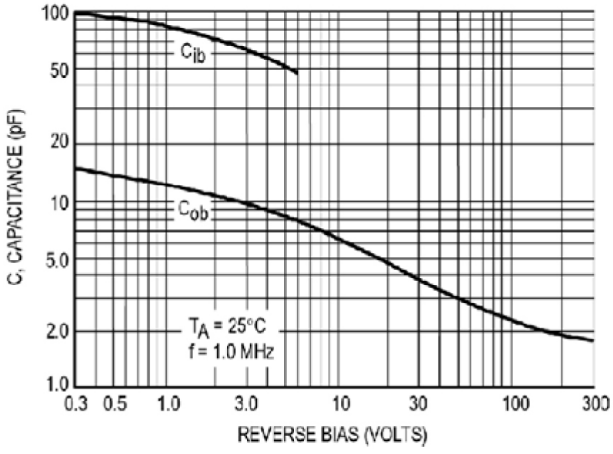
Collector Saturation Region



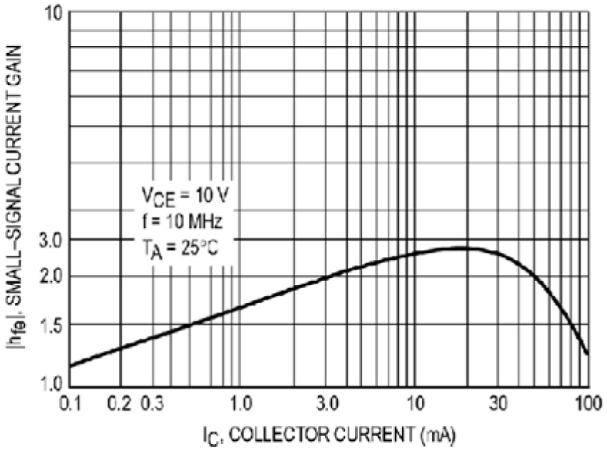
"On" Voltages



Active Region — Safe Operating Area



Capacitance



High Frequency Current Gain