

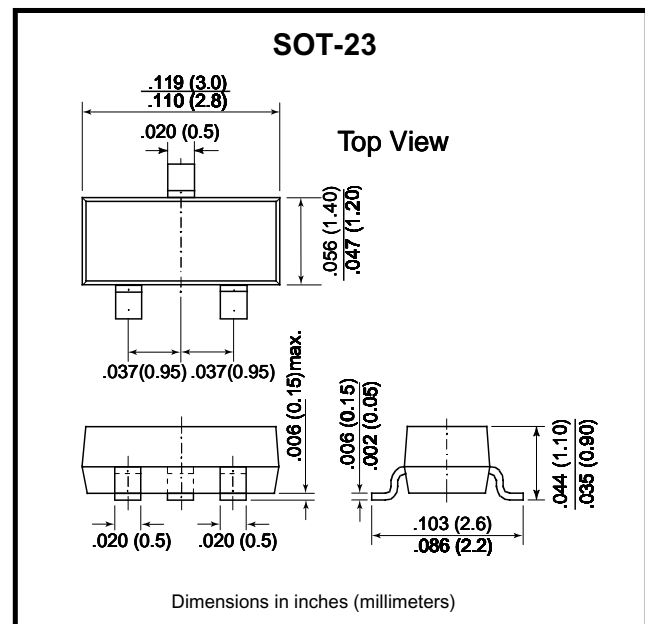
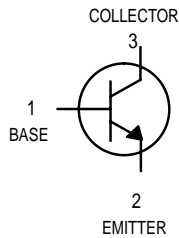
# High Voltage Transistor (NPN)

## BTC4505N3

### Features

High breakdown voltage. ( $V_{CE0} = 400V$ )

Low saturation voltage, typically  $V_{CE(sat)} = 0.1V$  at  $I_C/I_B = 10mA/1mA$



Parameter	Symbol	Limit	Unit
Collector-Base Voltage	$V_{CBO}$	400	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	300	mA
Power Dissipation	$P_d$	0.225	W
Junction Temperature	$T_j$	150	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55~+150	$^{\circ}C$

## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
$BV_{CBO}$	400	-	-	V	$I_C=50\mu A, I_E=0$
$BV_{CEO}$	400	-	-	V	$I_C=1mA, I_B=0$
$BV_{EBO}$	6	-	-	V	$I_E=50\mu A, I_C=0$
$I_{CBO}$	-	-	10	$\mu A$	$V_{CB}=400V, I_E=0$
$I_{CER}$	-	-	20	nA	$V_{CE}=300V, R_{EB}=4k\Omega$
$I_{EBO}$	-	-	10	$\mu A$	$V_{EB}=6V, I_C=0$
$*V_{CE(sat)}$	-	0.1	0.5	V	$I_C=10mA, I_B=1mA$
$*V_{BE(sat)}$	-	-	1.5	V	$I_C=10mA, I_B=1mA$
$h_{FE}$	52	-	270	-	$V_{CE}=10V, I_C=10mA$
$f_T$	-	20	-	MHz	$V_{CE}=10V, I_C=10mA, f=10MHz$
$C_{ob}$	-	7	-	pF	$V_{CB}=10V, f=1MHz$

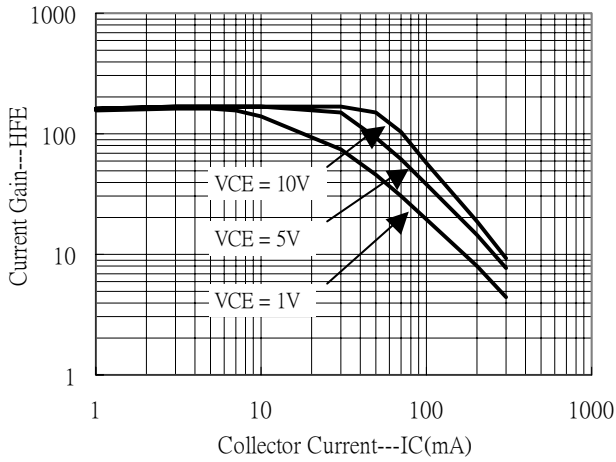
\*Pulse Test : Pulse Width  $\leq 380\mu s$ , Duty Cycle  $\leq 2\%$

## Classification Of $h_{FE}$

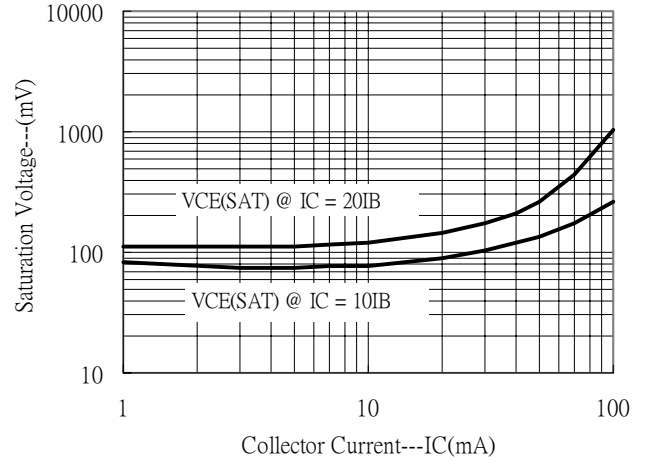
Rank	K	P	Q
Range	52~120	82~180	120~270

## Characteristic Curves

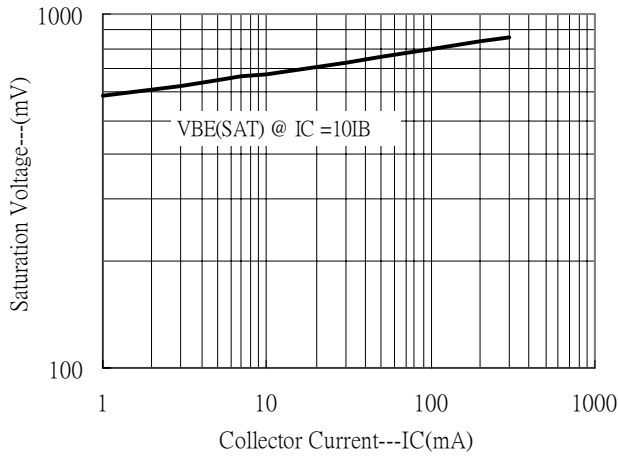
Current Gain vs Collector Current



Saturation Voltage vs Collector Current



Saturation Voltage vs Collector Current



Power Derating Curve

