

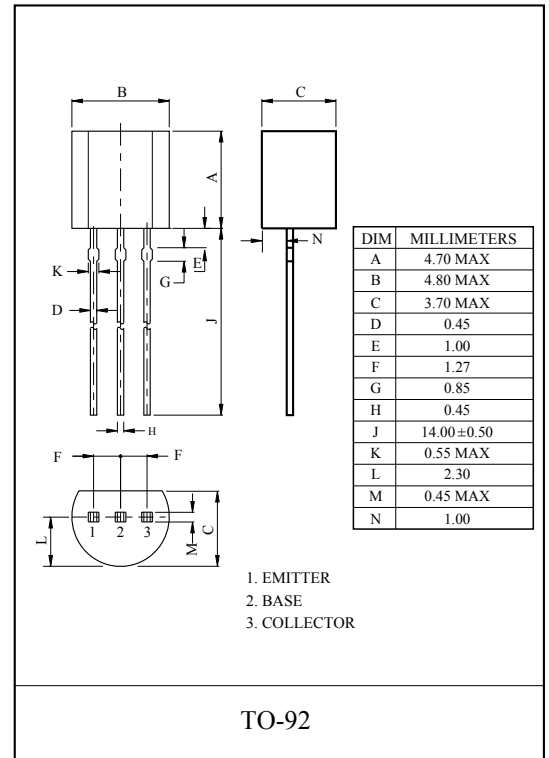
HIGH VOLTAGE APPLICATION.

**FEATURES**

- High Breakdown Voltage.
- Collector Power Dissipation :  $P_C=625\text{mW}$ .

**MAXIMUM RATING (Ta=25°C)**

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage	MPSA44	$V_{CBO}$	500	V
	MPSA45		400	
Collector-Emitter Voltage	MPSA44	$V_{CEO}$	400	V
	MPSA45		350	
Emitter-Base Voltage		$V_{EBO}$	6	V
Collector Current		$I_C$	300	mA
Collector Power Dissipation		$P_C$	625	mW
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C



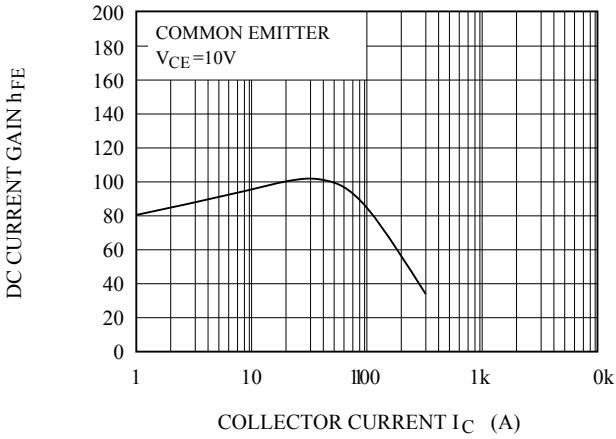
**ELECTRICAL CHARACTERISTICS (Ta=25°C)**

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	MPSA44	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	500	-	-	V
	MPSA45			400			
Collector-Emitter Breakdown Voltage (1)	MPSA44	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	400	-	-	V
	MPSA45			350			
Collector-Emitter Breakdown Voltage (2)		$V_{(BR)CES}$	$I_C=100\mu A, I_B=0$	400	-	-	V
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6.0	-	-	V
Collector Cut off Current	MPSA44	$I_{CBO}$	$V_{CB}=400\text{V}, I_E=0$	-	-	100	nA
	MPSA45		$V_{CB}=320\text{V}, I_E=0$			100	
Collector Cut off Current	MPSA44	$I_{CES}$	$V_{CE}=400\text{V}, I_B=0$	-	-	500	nA
	MPSA45		$V_{CE}=320\text{V}, I_B=0$			500	
Emitter Cutoff Current		$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$	-	-	100	nA
DC Current Gain *		$h_{FE}$	$V_{CE}=10\text{V}, I_C=1\text{mA}$	40	-	-	
			$V_{CE}=10\text{V}, I_C=10\text{mA}$	50	-	200	
			$V_{CE}=10\text{V}, I_C=50\text{mA}$	45	-	-	
			$V_{CE}=10\text{V}, I_C=100\text{mA}$	40	-	-	
Collector-Emitter Saturation Voltage *		$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$	-	-	0.5	V
Base-Emitter Saturation Voltage *		$V_{BE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$	-	-	0.75	V

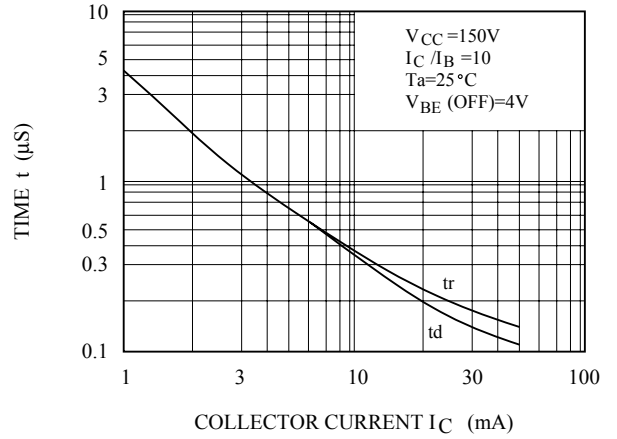
\*Pulse Test : Pulse Width  $\leq 300\mu S$ , Duty Cycle  $\leq 2.0\%$

# MPSA44/45

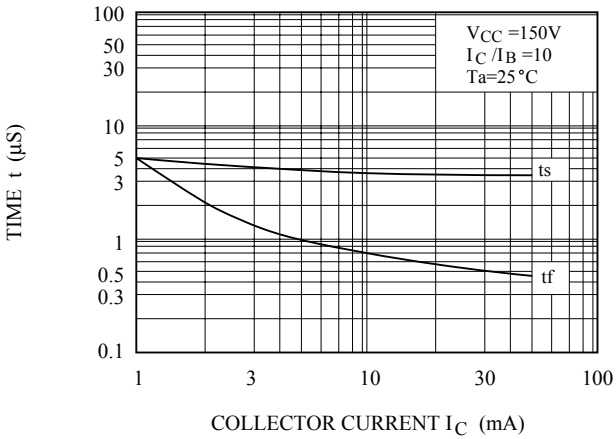
$h_{FE} - I_C$



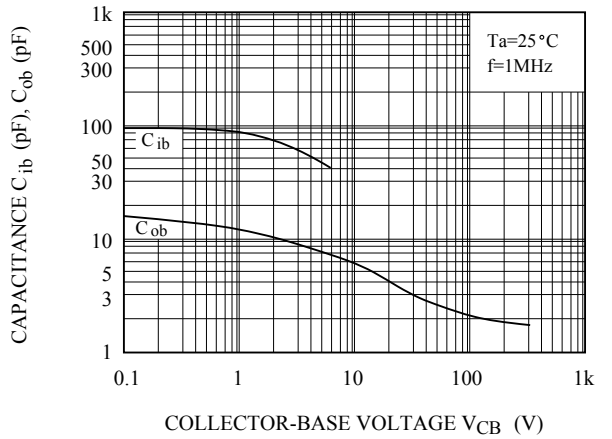
TURN-ON SWITCHING CHARACTERISTICS



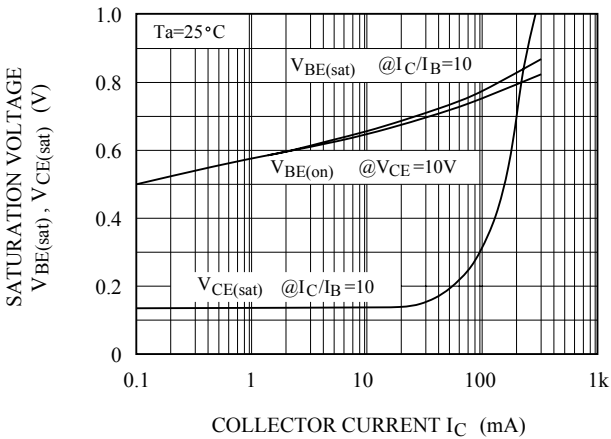
TURN-OFF SWITCHING CHARACTERISTICS



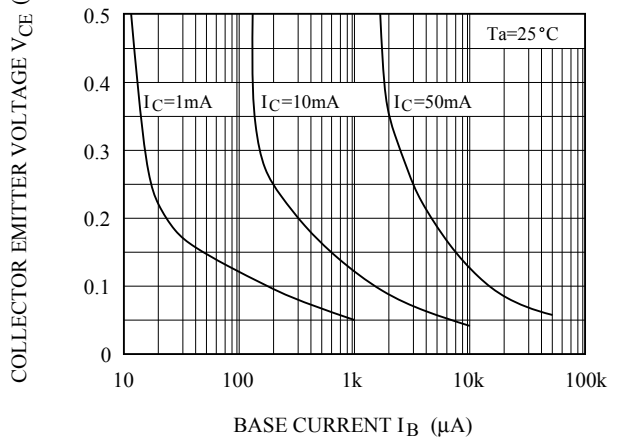
$C_{ib}, C_{ob} - V_{CB}$



$V_{BE(sat)}, V_{CE(sat)} - I_C$

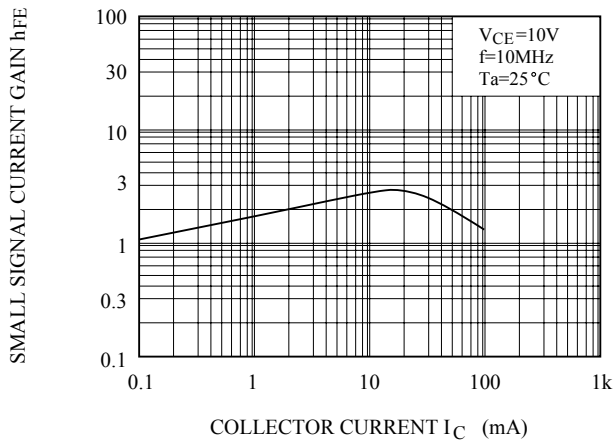


COLLECTOR SATURATION REGION



# MPSA44/45

### $h_{FE} - I_C$



### SAFE OPERATING AREA

