

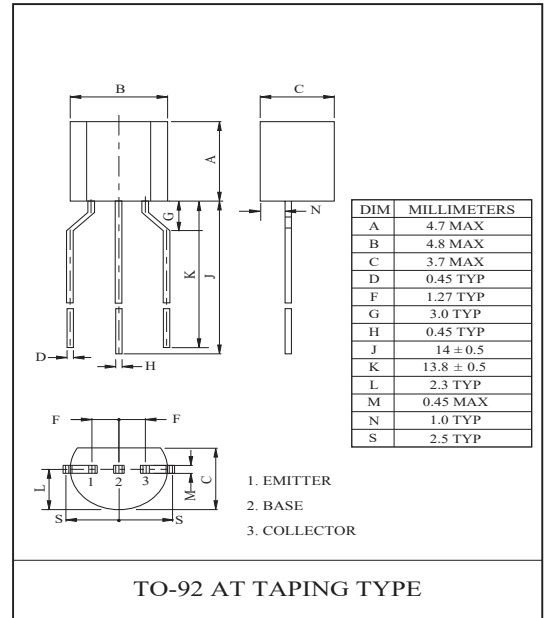
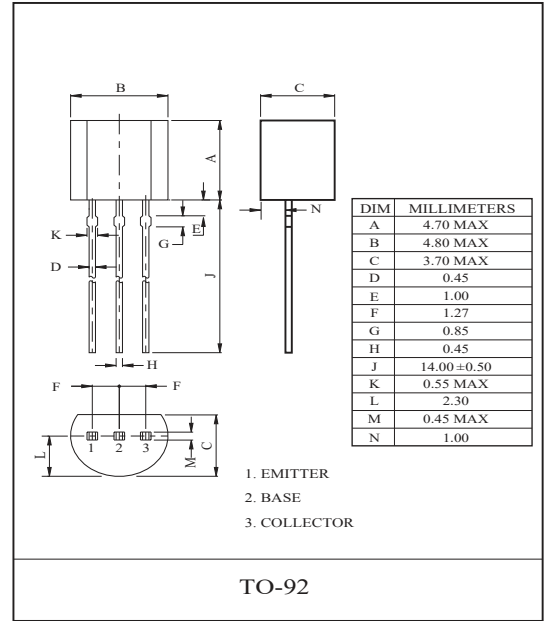
HIGH VOLTAGE APPLICATION.

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



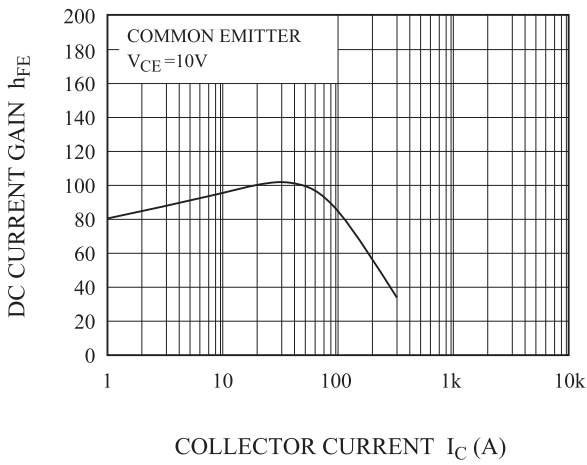
ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	MPSA44	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	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)		$V_{(BR)CES}$	$I_C=100\mu\text{A}, I_B=0$	400	-	-	V
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	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

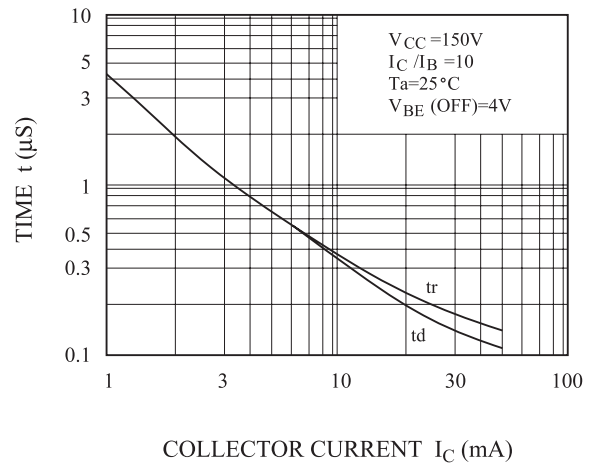
*Pulse Test : Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

MPSA44/45

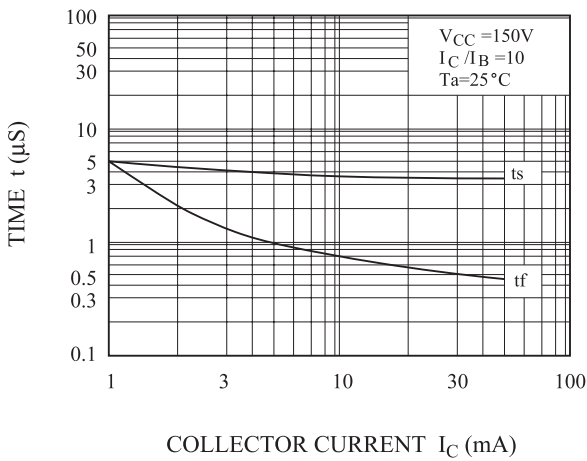
$h_{FE} - I_C$



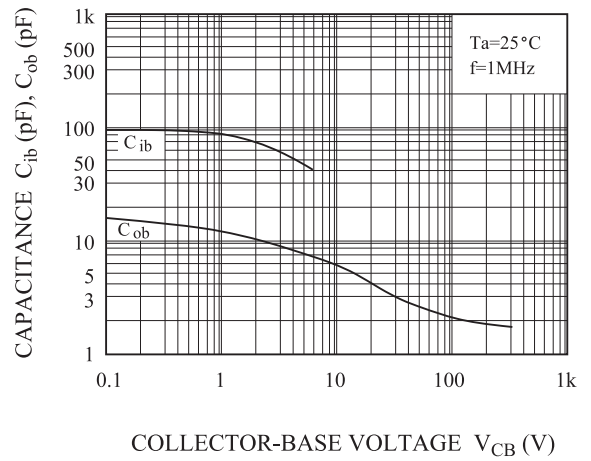
TURN-ON SWITCHING CHARACTERISTICS



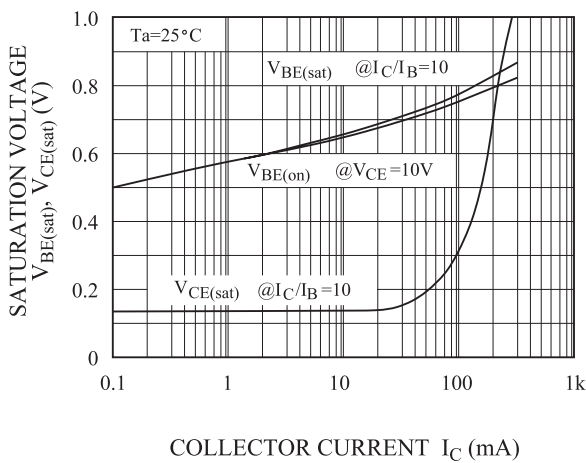
TURN-OFF SWITCHING CHARACTERISTICS



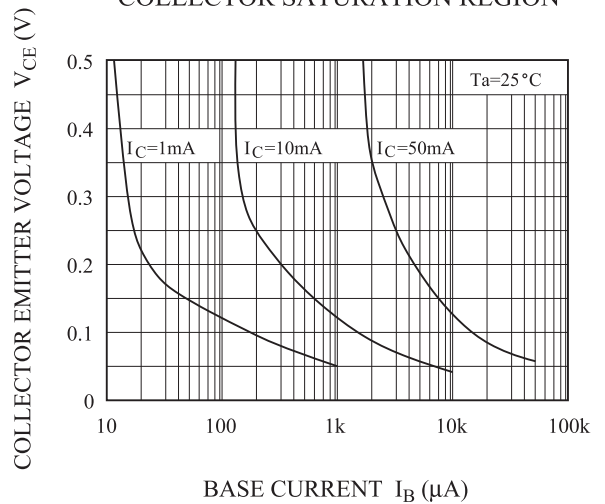
$C_{ib}, C_{ob} - V_{CB}$



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

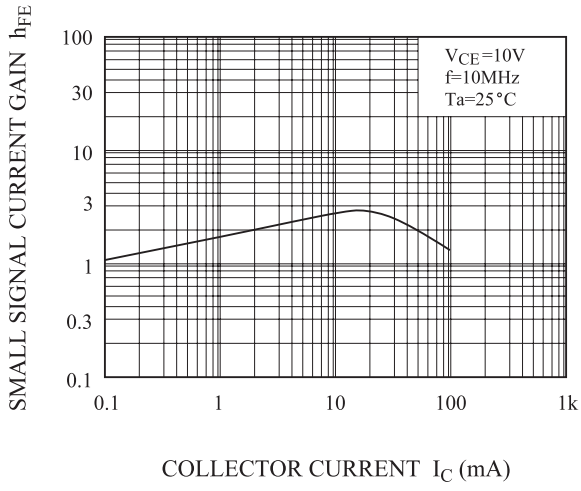


COLLECTOR SATURATION REGION



MPSA44/45

$h_{FE} - I_C$



SAFE OPERATING AREA

