

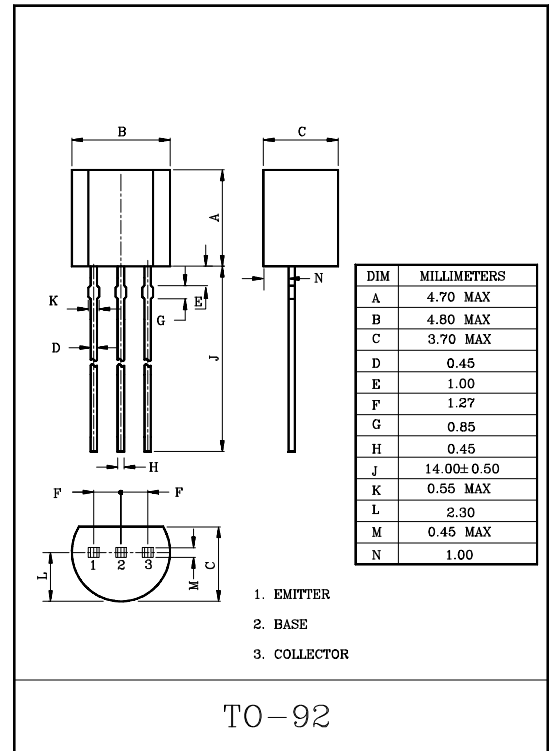
HIGH VOLTAGE APPLICATION.

FEATURES

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

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	$-55\sim 150$	$^\circ\text{C}$

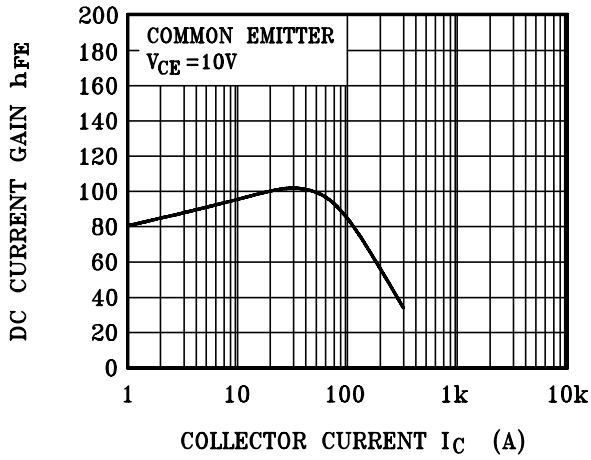


ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

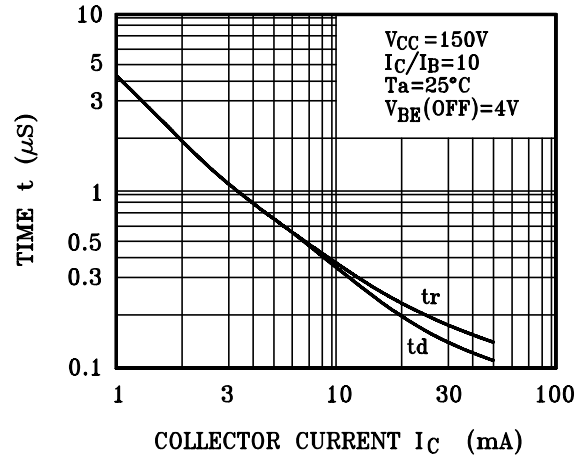
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	MPSA44	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	500	-	-	V
	MPSA45			400			
Collector-Emitter Breakdown Voltage (1)	MPSA44	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	400	-	-	V
	MPSA45			350			
Collector-Emitter Breakdown Voltage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

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

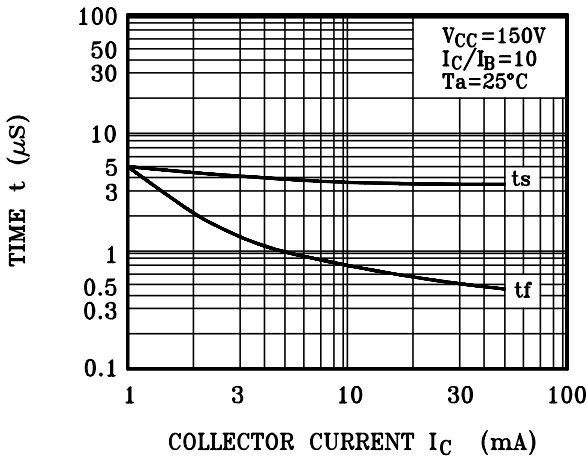
$h_{FE} - I_C$



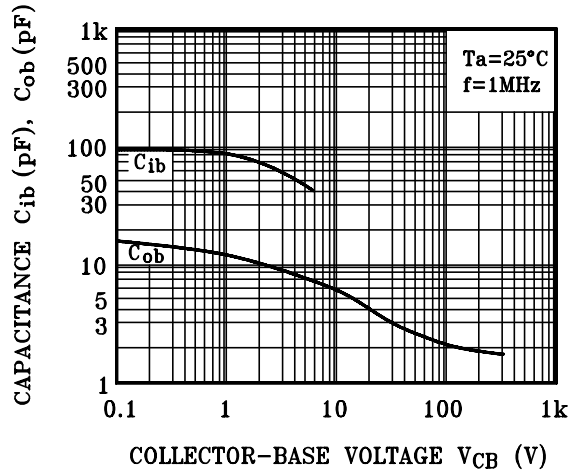
TURN-ON SWITCHING CHARACTERISTICS



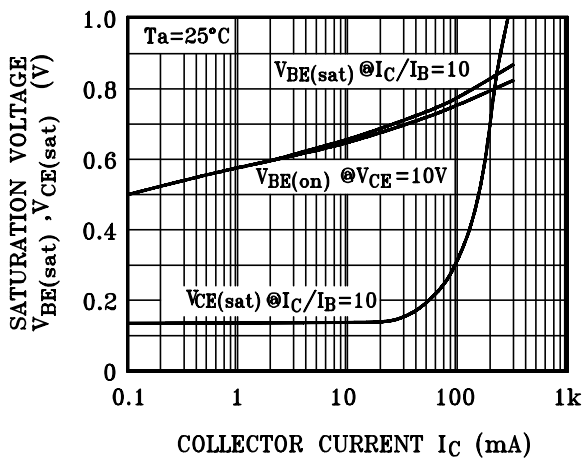
TURN-OFF SWITCHING CHARACTERISTICS



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



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



COLLECTOR SATURATION REGION

