

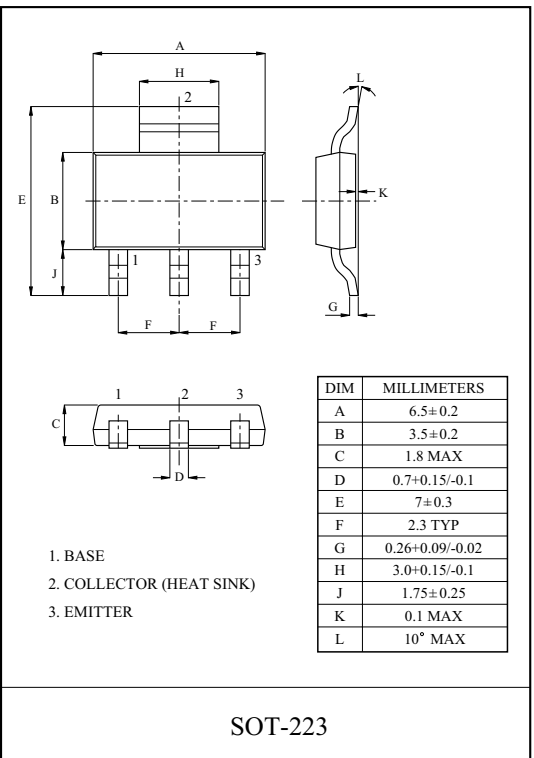
HIGH VOLTAGE APPLICATION.
TELEPHONE APPLICATION.

FEATURES

- High Breakdown Voltage.
- Collector Power Dissipation : $P_C=2W(T_C=25^\circ\text{C})$

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	500	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	300	mA
Collector Power Dissipation ($T_C=25^\circ\text{C}$)	P_C	2	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ\text{C}$

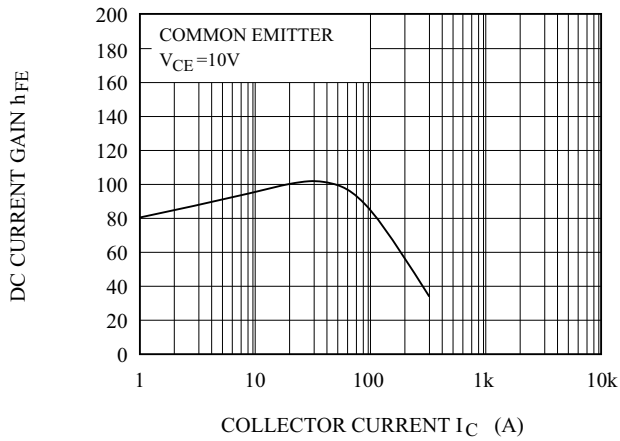
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}$, $I_E=0$	500	-	-	V
Collector-Emitter Breakdown Voltage (1)	$V_{(BR)CEO}$	$I_C=1\text{mA}$, $I_B=0$	400	-	-	V
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	I_{CBO}	$V_{CB}=400\text{V}$, $I_E=0$	-	-	100	nA
		$V_{CB}=320\text{V}$, $I_E=0$				
Collector Cut off Current	I_{CES}	$V_{CE}=400\text{V}$, $I_B=0$	-	-	500	nA
		$V_{CE}=320\text{V}$, $I_B=0$				
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
Collector Output Capacitance	C_{ob}	$V_{CB}=20\text{V}$, $I_E=0$, $f=1\text{MHz}$	-	-	7	pF

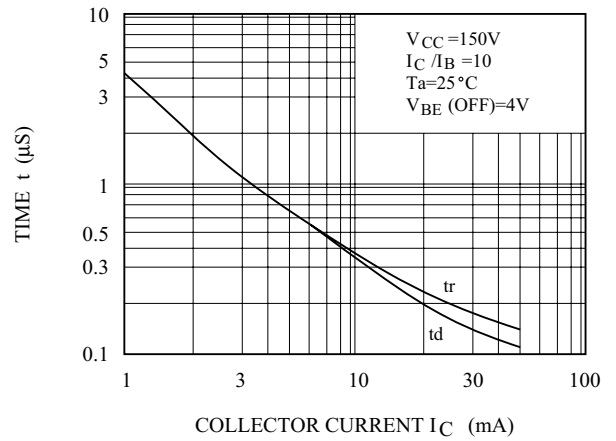
*Pulse Test : Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$

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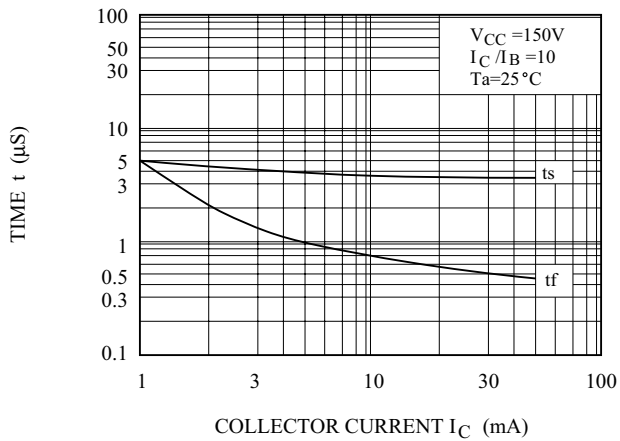
$h_{FE} - I_C$



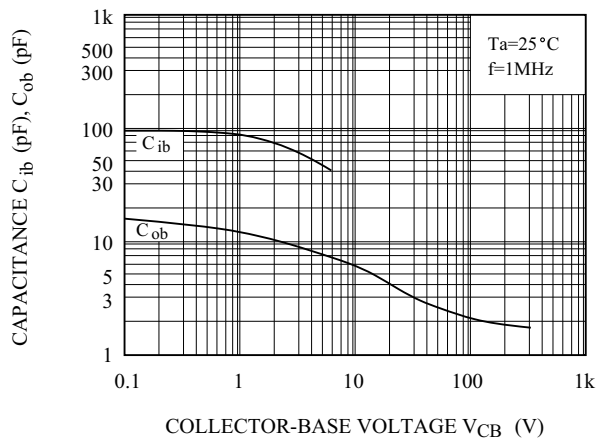
TURN-ON SWITCHING CHARACTERISTICS



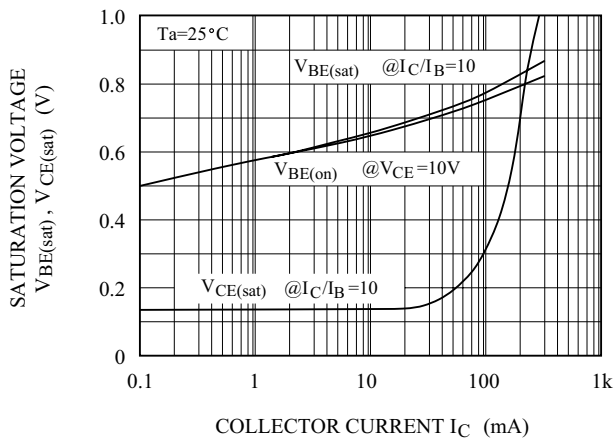
TURN-OFF SWITCHING CHARACTERISTICS



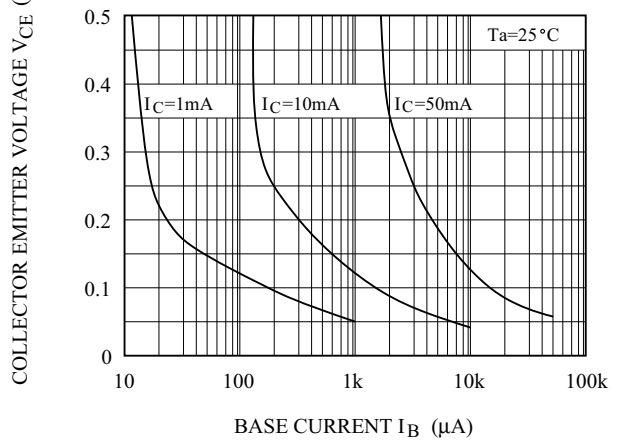
$C_{ib}, C_{ob} - V_{CB}$



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



COLLECTOR SATURATION REGION



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