

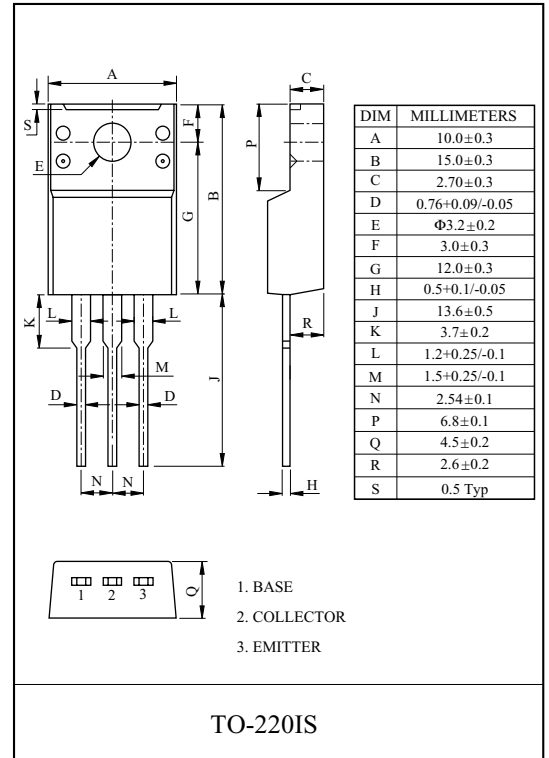
SWITCHING REGULATOR APPLICATION.
HIGH VOLTAGE SWITCHING APPLICATION.

FEATURES

- Excellent Switching Times.
: $t_{on}=0.5\mu\text{s}(\text{Max.})$, $t_f=0.3\mu\text{s}(\text{Max.})$, at $I_C=4\text{A}$.
- High Collector Voltage : $V_{CEO}=500\text{V}$.

MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	800	V
Collector-Emitter Voltage		V_{CEO}	500	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	5	A
	Pulse	I_{CP}	10	
Base Current		I_B	2	A
Collector Power Dissipation (Tc=25 °C)		P_C	40	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	-55 ~ 150	°C

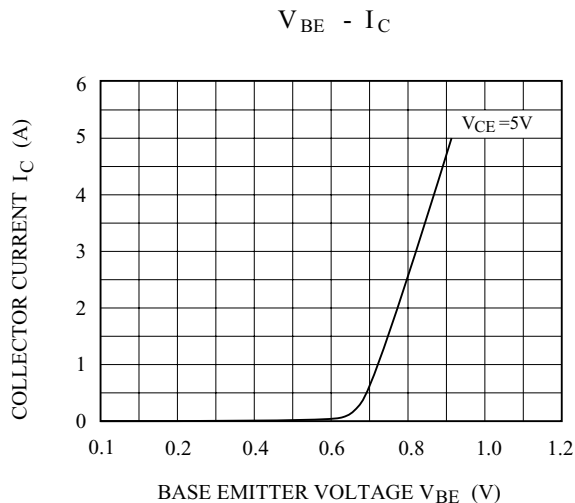
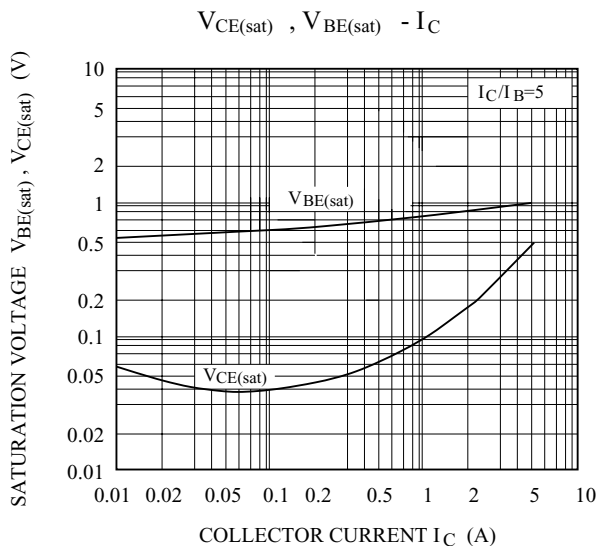
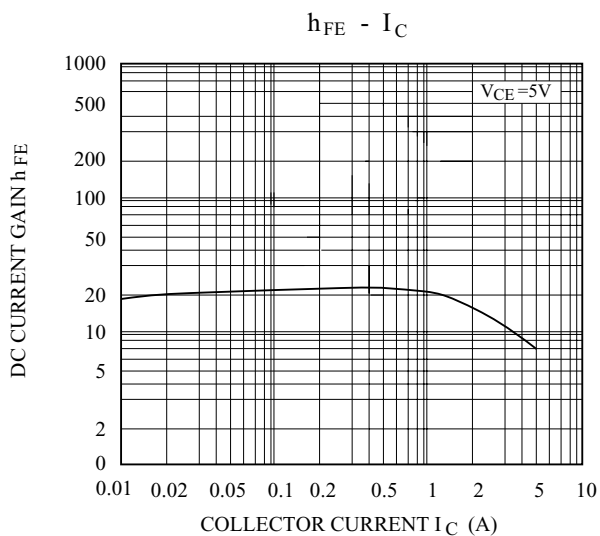
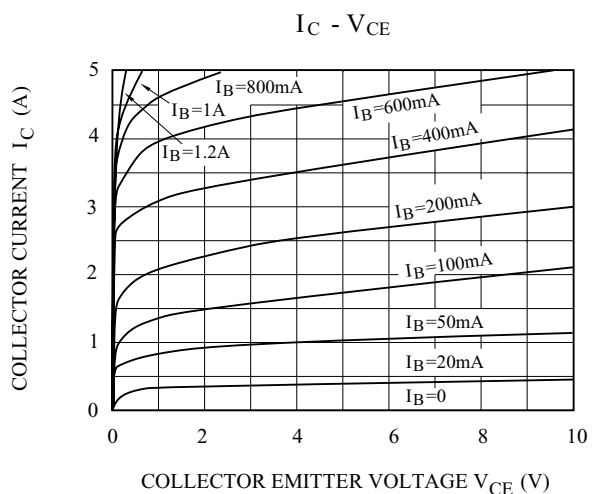


ELECTRICAL CHARACTERISTICS (Ta=25 °C)

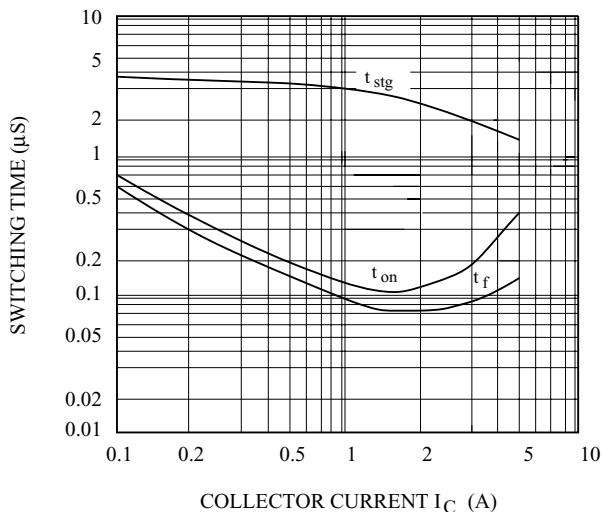
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=500\text{V}$, $I_E=0$	-	-	10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$	-	-	10	μA
Collector-Emitter Sustaining Voltage		$V_{CEX(\text{SUS})}$	$I_C=2.5\text{A}$, $I_{B1}=-I_{B2}=1\text{A}$ L=1mH, Clamped	500	-	-	V
Collector-Emitter Saturation Voltage		$V_{CE(\text{sat})}$	$I_C=3\text{A}$, $I_B=0.6\text{A}$	-	-	1	V
Base-Emitter Saturation Voltage		$V_{BE(\text{sat})}$	$I_C=3\text{A}$, $I_B=0.6\text{A}$	-	-	1.5	V
DC Current Gain	$h_{FE}(1)$ (Note)		$V_{CE}=5\text{V}$, $I_C=0.6\text{A}$	15	-	50	
	$h_{FE}(2)$		$V_{CE}=5\text{V}$, $I_C=3\text{A}$	8	-	-	
Collector Output Capacitance		C_{ob}	$V_{CB}=10\text{V}$, $I_E=0$, f=1MHz	-	80	-	pF
Transition Frequency		f_T	$V_{CE}=10\text{V}$, $I_C=0.6\text{A}$	-	18	-	MHz
Switching Time	Turn On Time	t_{on}	<p>$I_{B1}=0.8\text{A}$, $I_{B2}=-1.6\text{A}$ DUTY CYCLE $\leq 1\%$</p>	-	-	0.5	μs
	Storage Time	t_{stg}		-	-	3	
	Fall Time	t_f		-	-	0.3	

Note : $h_{FE}(1)$ Classification R:15 ~ 30, O:20 ~ 40, Y:30 ~ 50

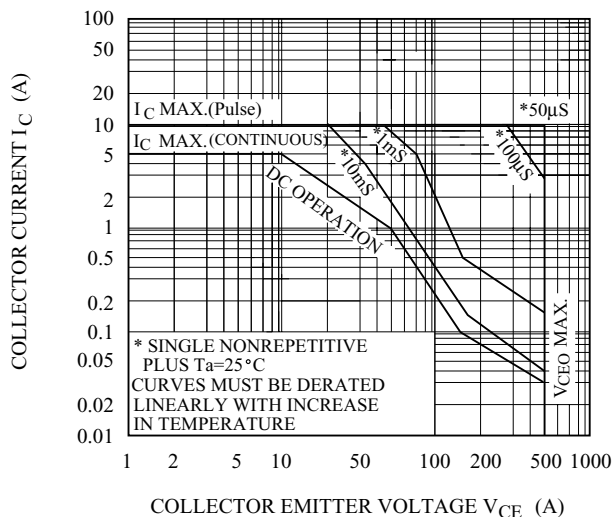
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SWITCHING CHARACTERISTICS

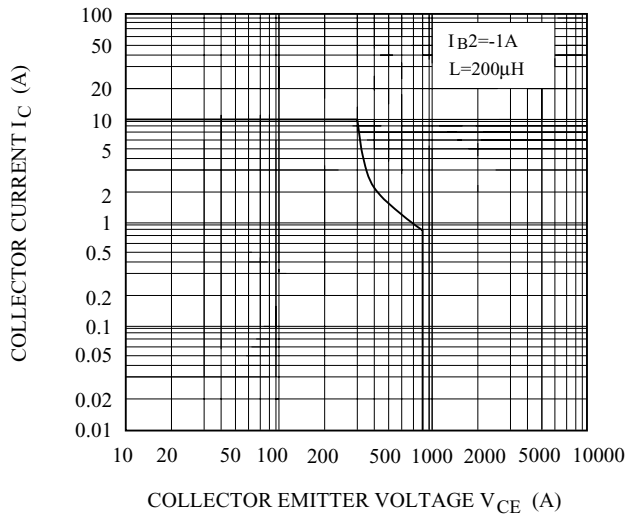


SAFE OPERATING AREA



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REVERSE BIAS SAFE OPERATING AREA



$P_c - T_a$

