

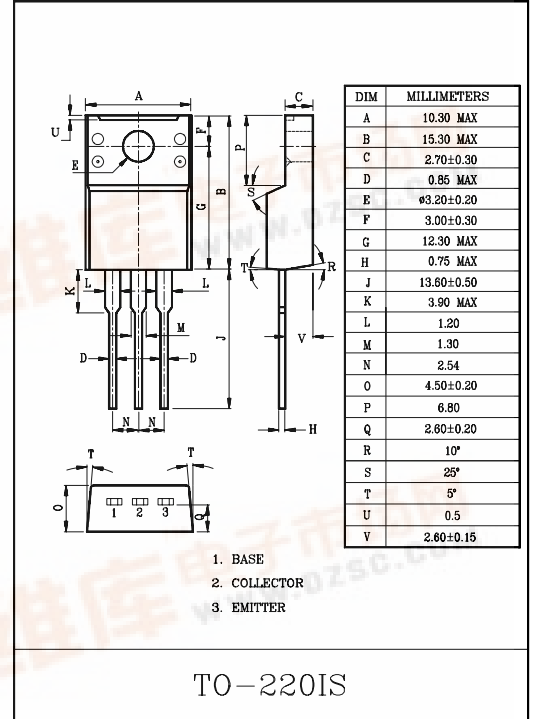
SWITCHING REGULATOR APPLICATION.
HIGH VOLTAGE SWITCHING APPLICATION.

FEATURES

- Excellent Switching Times.
: $t_{on}=0.5\mu S(\text{Max.})$, $t_f=0.3\mu S(\text{Max.})$, at $I_C=4A$.
- High Collector Voltage : $V_{CE0}=500V$.

MAXIMUM RATINGS (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_C	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



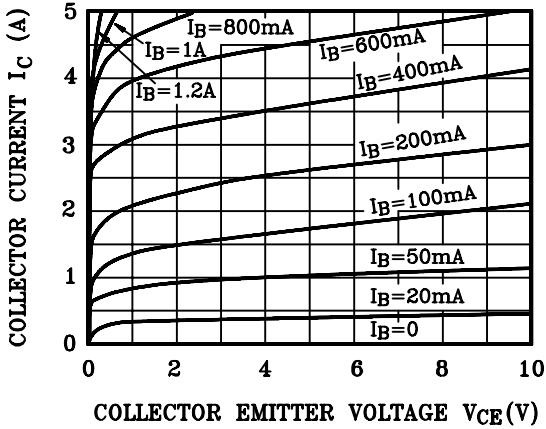
ELECTRICAL CHARACTERISTICS (Ta=25°C)

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

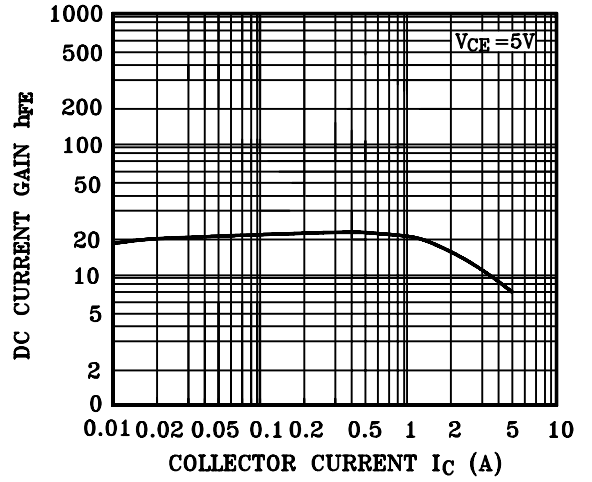


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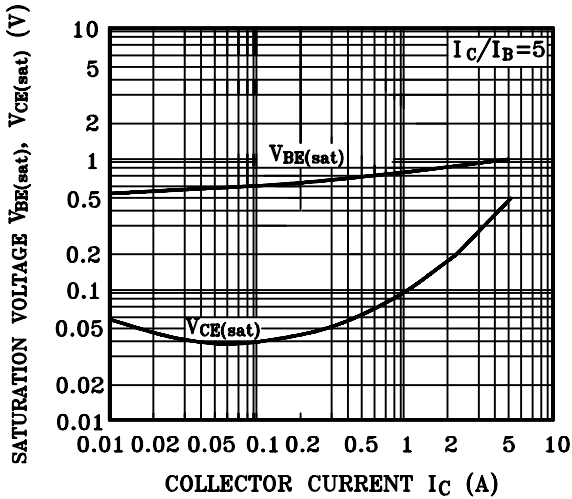
$I_C - V_{CE}$



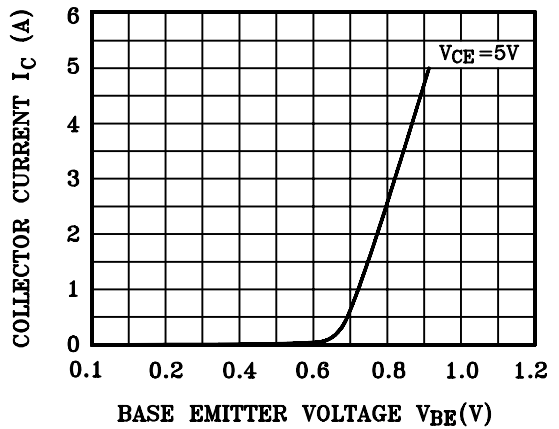
$h_{FE} - I_C$



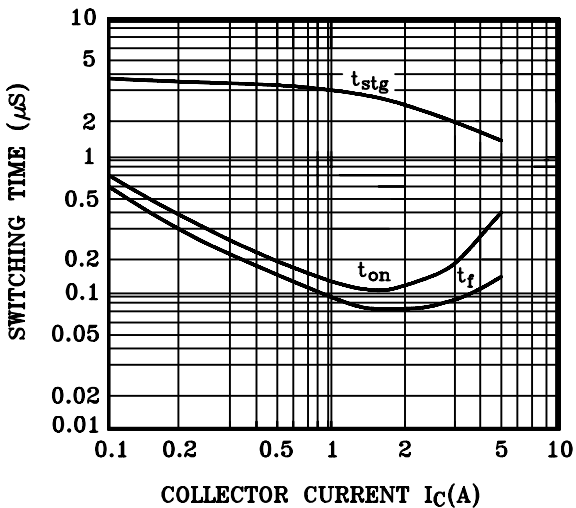
$V_{CE(sat)}, V_{BE(sat)} - I_C$



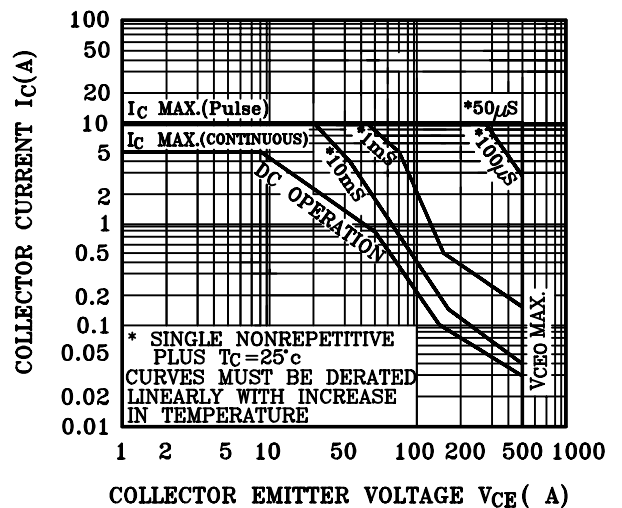
$V_{BE} - I_C$



SWITCHING CHARACTERISTICS

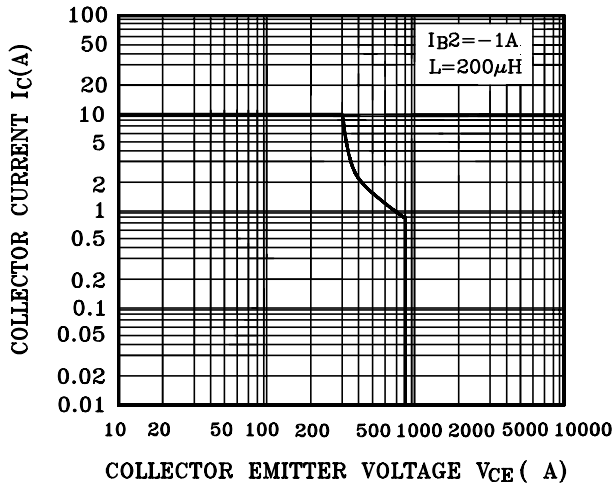


SAFE OPERATING AREA



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REVERSE BIAS SAFE OPERATING AREA



$P_C - T_a$

