

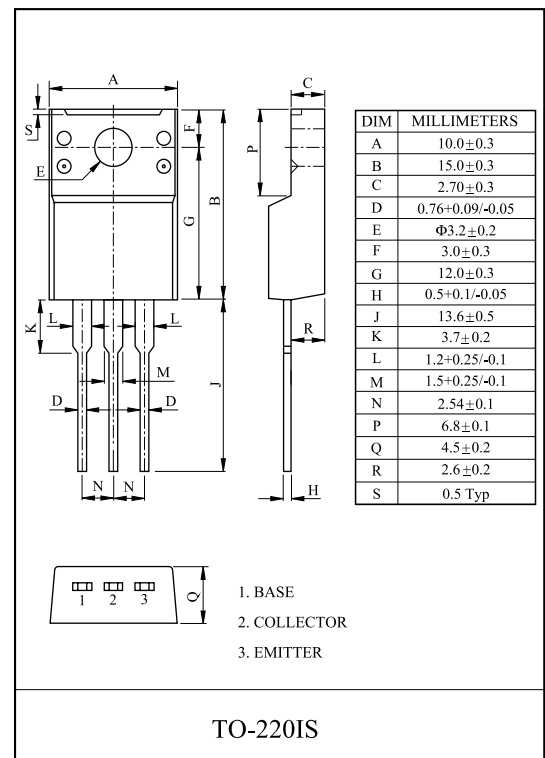
SWITCHING REGULATOR APPLICATION.
HIGH VOLTAGE SWITCHING APPLICATION.

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 : $V_{CEO}=500\text{V}$.

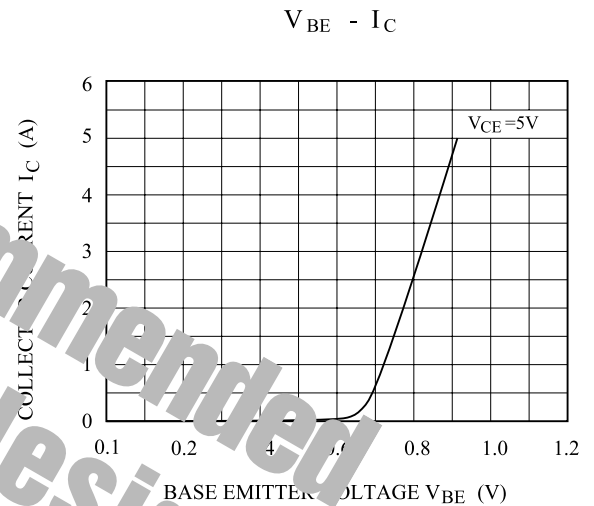
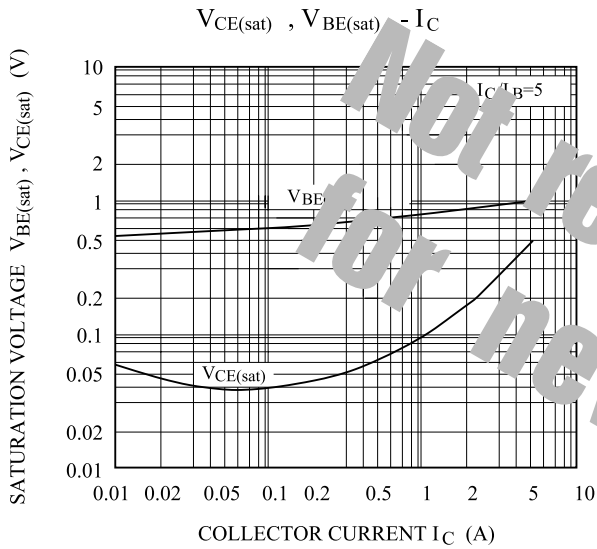
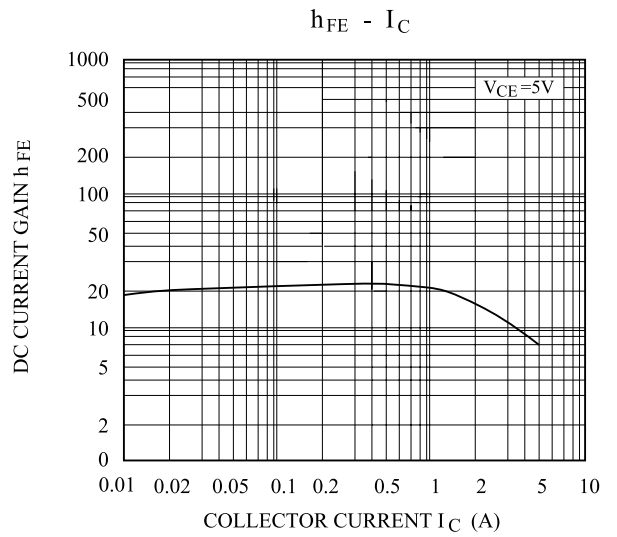
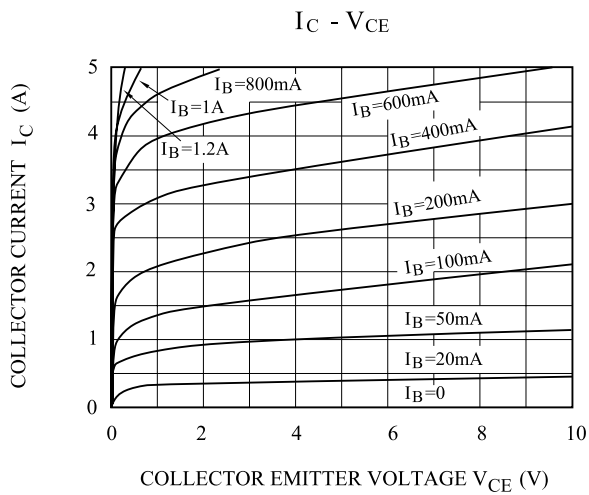
MAXIMUM RATING ($T_a=25^\circ\text{C}$)

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 ($T_c=25^\circ\text{C}$)		P_C	10	W
Junction Temperature		T_j	50	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55 ~ 150	$^\circ\text{C}$

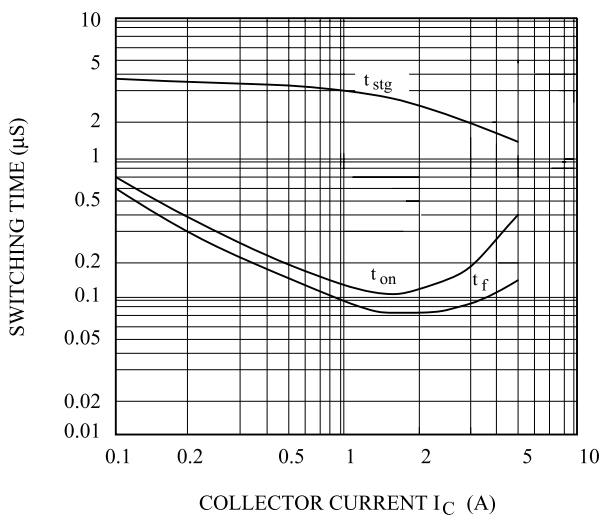
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector 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		$V_{CEX(SUS)}$	$I_C=2.5\text{A}$, $I_{B1}=-I_{B2}=1\text{A}$ $L=1\text{mH}$, Clamped	500	-	-	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=3\text{A}$, $I_B=0.6\text{A}$	-	-	1	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=3\text{A}$, $I_B=0.6\text{A}$	-	-	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}	$V_{CB}=10\text{V}$, $I_E=0$, $f=1\text{MHz}$	-	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}	$I_{B1}=0.8\text{A}$, $I_{B2}=1.6\text{A}$ DUTY CYCLE $\leq 1\%$	-	-	0.5	μs
	Storage Time	t_{stg}		-	-	3	
	Fall Time	t_f		-	-	0.3	

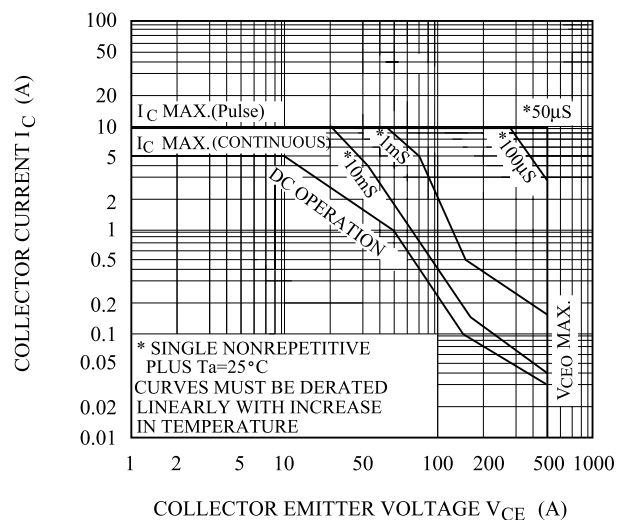
Note : $h_{FE}(1)$ Classification R:15 30, O:20 40, Y:30 50



SWITCHING CHARACTERISTICS

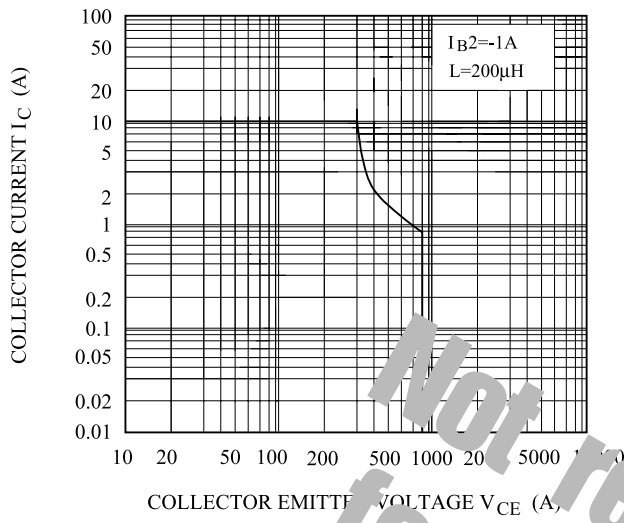


SAFE OPERATING AREA

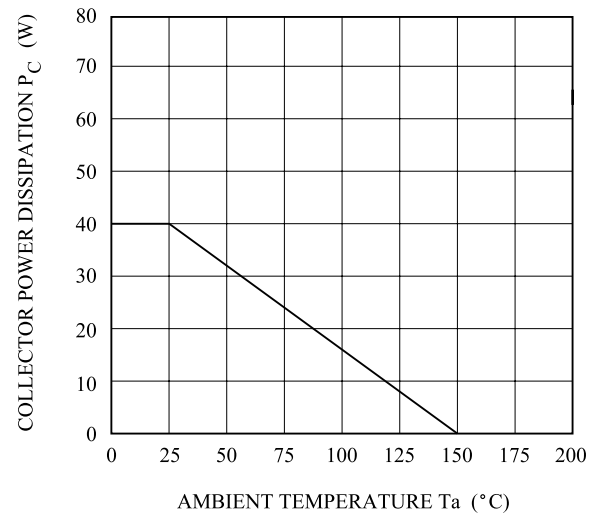


KTC4521F

REVERSE BIAS SAFE OPERATING AREA



$P_C - T_a$



Not recommended
for new design