

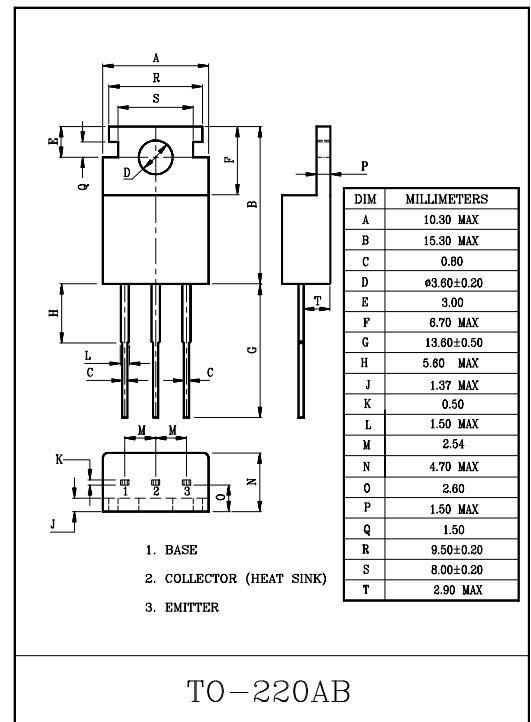
SWITCHING REGULATOR APPLICATION.  
HIGH VOLTAGE SWITCHING APPLICATION.

### FEATURES

- Excellent Switching Times.  
:  $t_{on}=0.5\mu\text{S}(\text{Max.})$ ,  $t_f=0.3\mu\text{S}(\text{Max.})$ , at  $I_C=2\text{A}$ .
- High Collector Voltage :  $V_{CE0}=500\text{V}$ .

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

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	$I_C$	3	A
	Pulse	$I_{CP}$	6	
Base Current		$I_B$	1	A
Collector Power Dissipation ( $T_c=25^\circ\text{C}$ )		$P_C$	40	W
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range		$T_{stg}$	-55 ~ 150	$^\circ\text{C}$

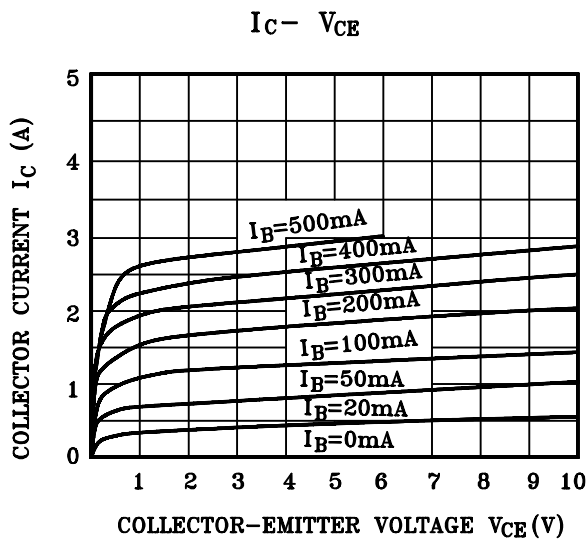
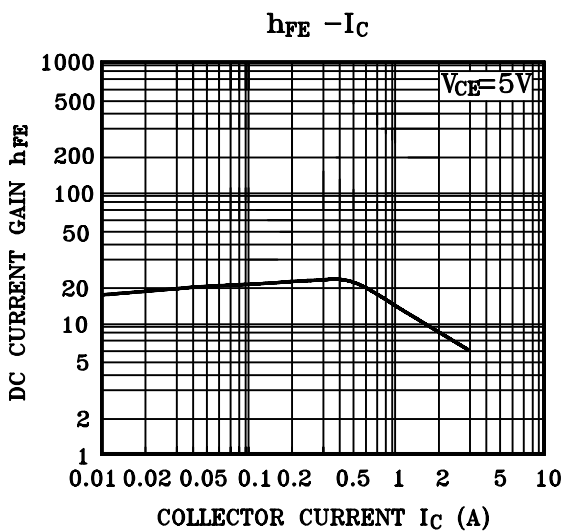
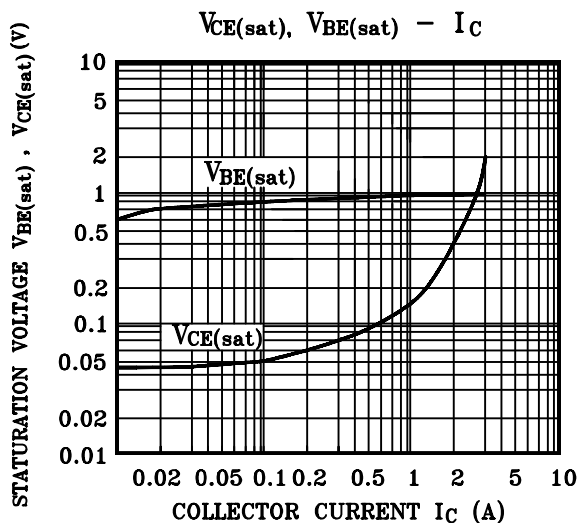
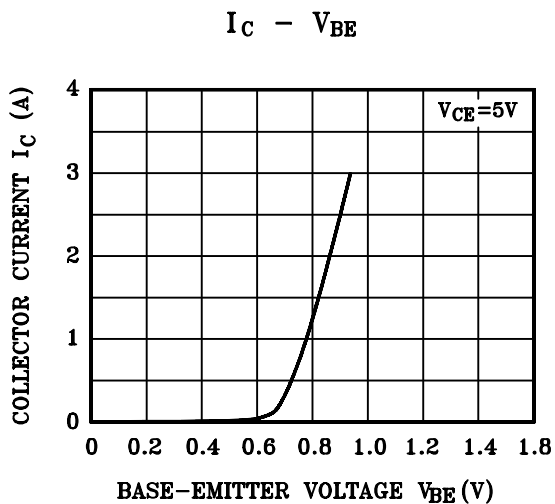


### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

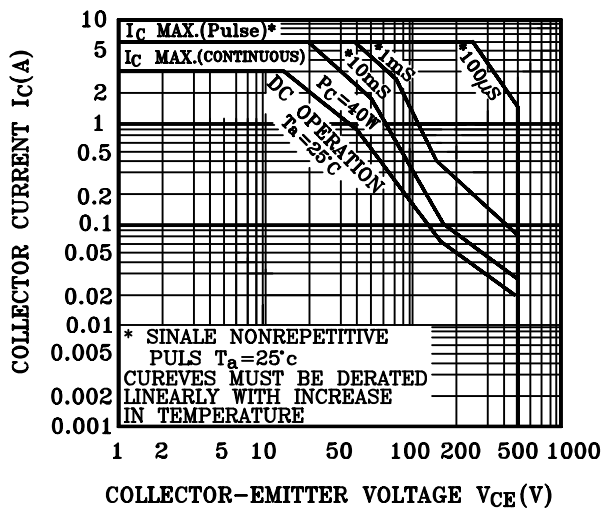
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=500\text{V}$ , $I_E=0$	-	-	10	$\mu\text{A}$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=5\text{V}$ , $I_C=0$	-	-	10	$\mu\text{A}$
Collector-Emitter Sustaining Voltage		$V_{CEX(\text{SUS})}$	$I_C=1.5\text{A}$ , $I_{B1}=-I_{B2}=0.6\text{A}$ $L=2\text{mH}$ , Clamped	500	-	-	V
Collector-Emitter Saturation Voltage		$V_{CE(\text{sat})}$	$I_C=1.5\text{A}$ , $I_B=0.3\text{A}$	-	-	1	V
Base-Emitter Saturation Voltage		$V_{BE(\text{sat})}$	$I_C=1.5\text{A}$ , $I_B=0.3\text{A}$	-	-	1.5	V
DC Current Gain	$h_{FE} (1)$ (Note)		$V_{CE}=5\text{V}$ , $I_C=0.3\text{A}$	15	-	50	
	$h_{FE} (2)$		$V_{CE}=5\text{V}$ , $I_C=1.5\text{A}$	8	-	-	
Collector Output Capacitance		$C_{ob}$	$V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$	-	50	-	pF
Transition Frequency		$f_T$	$V_{CE}=10\text{V}$ , $I_C=0.3\text{A}$	-	18	-	MHz
Switching Time	Turn On Time	$t_{on}$	<p><math>I_{B1}=0.4\text{A}</math>, <math>I_{B2}=-0.8\text{A}</math> DUTY CYCLE <math>\leq 1\%</math></p>	-	-	0.5	$\mu\text{S}$
	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

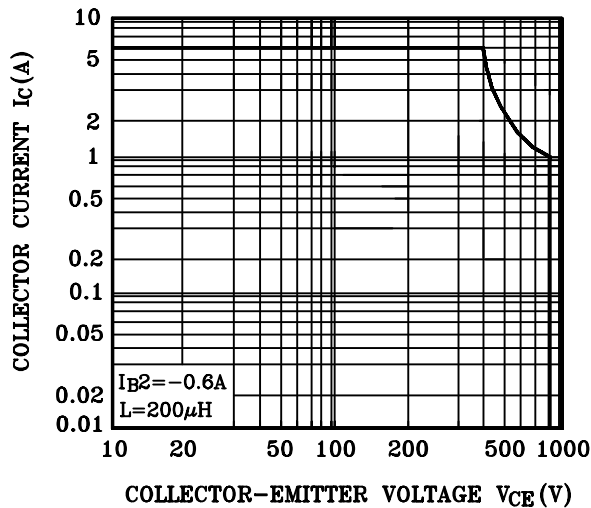
# KTC4520



## SAFE OPERATING AREA



## REVERSE BIAS SAFE OPERATING AREA



# KTC4520

