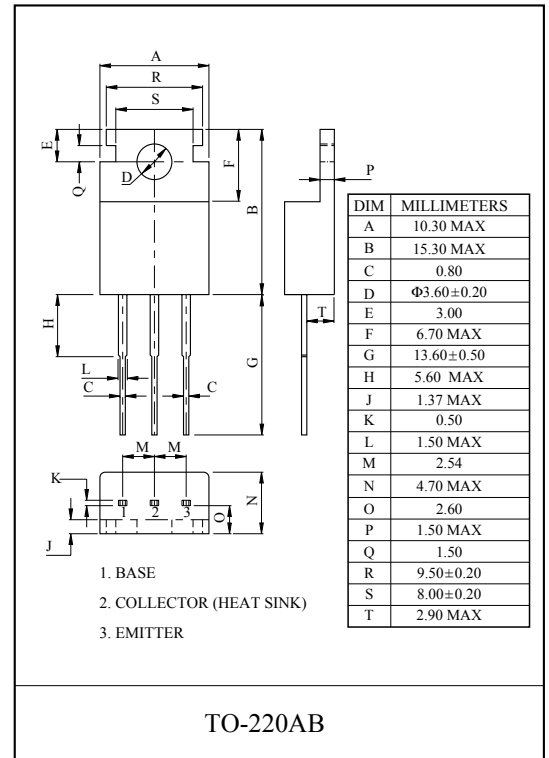


HIGH VOLTAGE AND HIGH RELIABILITY  
HIGH SPEED SWITCHING, WIDE SOA

### MAXIMUM RATING (Ta=25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		$V_{CBO}$	1100	V
Collector-Emitter Voltage		$V_{CEO}$	800	V
Emitter-Base Voltage		$V_{EBO}$	7	V
Collector Current	DC	$I_C$	3	A
	Pulse	$I_{CP}$	10	
Base Current		$I_B$	1.5	A
Collector Power Dissipation (Tc=25°C)		$P_C$	50	W
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C



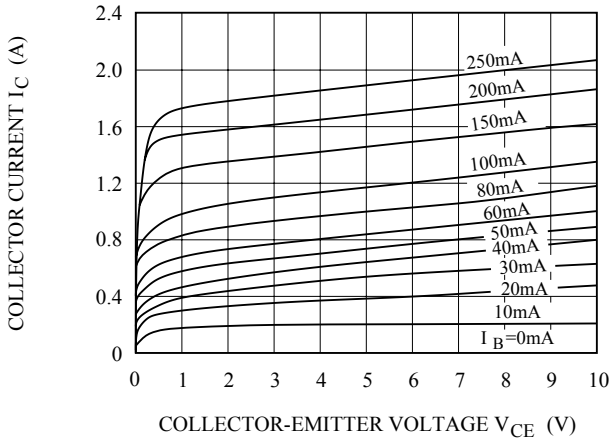
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=800V, I_E=0$	-	-	10	μA
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	10	μA
Collector-Emitter Sustaining Voltage		$V_{CEX(SUS)}$	$I_C=1.5A, I_{B1}=-I_{B2}=0.3A$ $L=2mH, \text{Clamped}$	800	-	-	V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=1.5A, I_B=0.3A$	-	-	2	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=1.5A, I_B=0.3A$	-	-	1.5	V
DC Current Gain		$h_{FE(1)}$ (Note)	$V_{CE}=5V, I_C=0.2A$	15	-	40	
		$h_{FE(2)}$	$V_{CE}=5V, I_C=1A$	8	-	-	
Collector-Base Breakdown Voltage		$BV_{CBO}$	$I_C=1mA, I_E=0$	1100	-	-	V
Collector-Emitter Breakdown Voltage		$BV_{CEO}$	$I_C=5mA, R_{BE}=\infty$	800	-	-	V
Emitter-Base Breakdown Voltage		$BV_{EBO}$	$I_E=1mA, I_C=0$	7	-	-	V
Collector Output Capacitance		$C_{ob}$	$V_{CB}=10V, f=1MHz, I_E=0$	-	60	-	pF
Transition Frequency		$f_T$	$V_{CE}=10V, I_C=0.2A$	-	15	-	MHz
Switching Time	Turn On Time	$t_{on}$		-	-	0.5	μS
	Storage Time	$t_{stg}$		-	-	3	
	Fall Time	$t_f$		-	-	0.3	

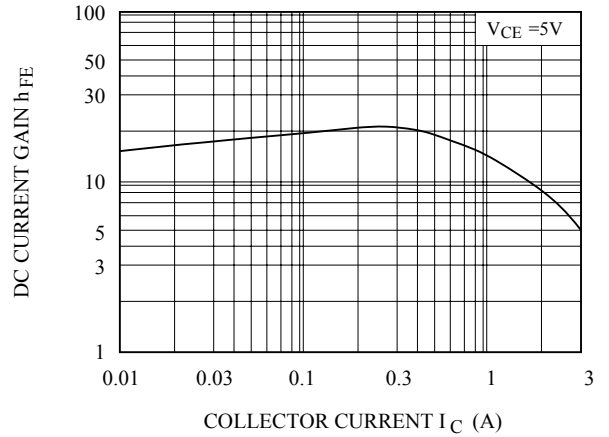
Note :  $h_{FE(1)}$  Classification R:15 ~ 30, O:20 ~ 40

# KTC4527

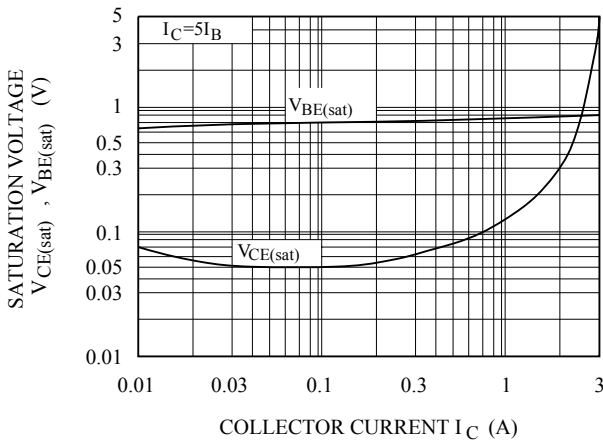
$I_C - V_{CE}$



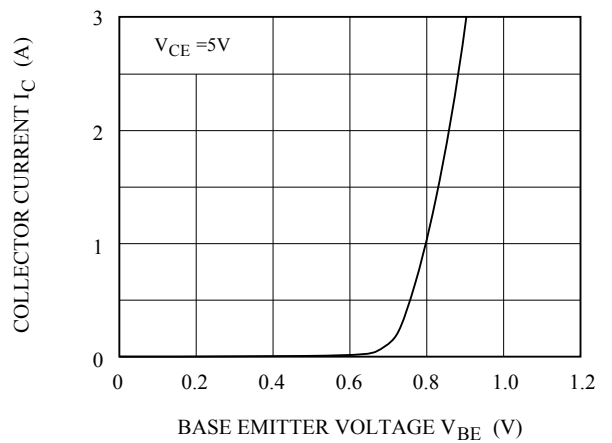
$h_{FE} - I_C$



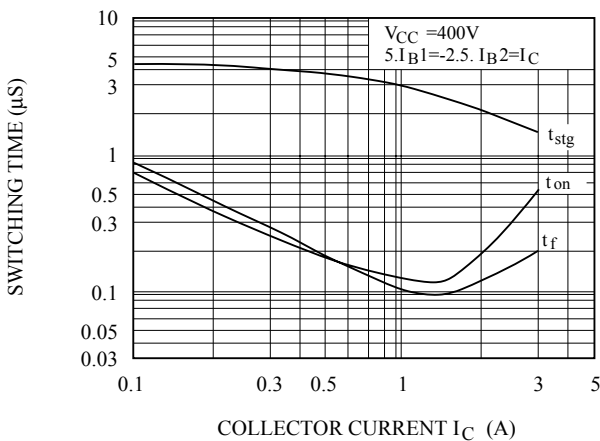
$V_{CE(sat)}, V_{BE(sat)} - I_C$



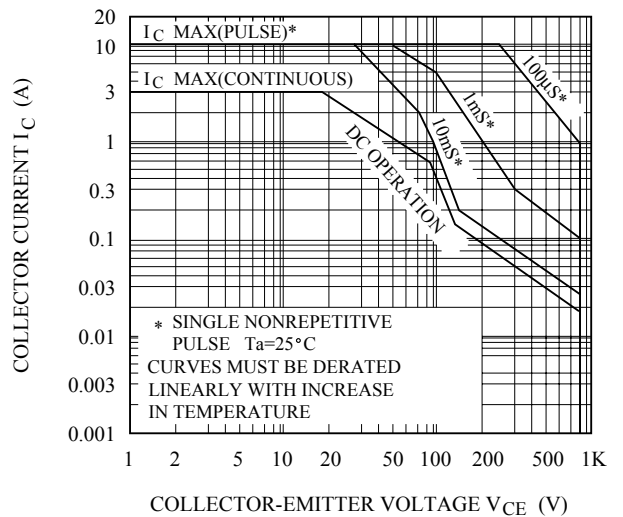
$I_C - V_{BE}$



SWITCHING CHARACTERISTICS

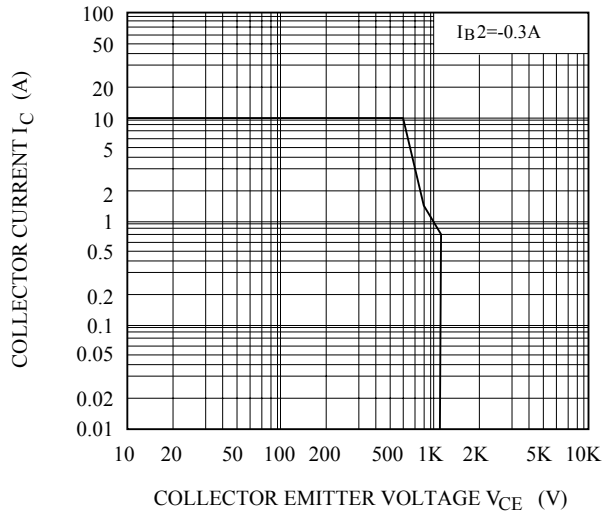


SAFE OPERATING AREA



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REVERSE BIAS SAFE OPERATING AREA



$P_c - T_a$

