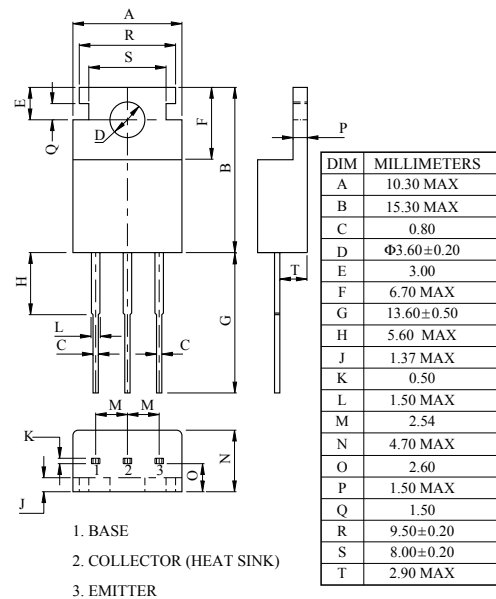


HIGH VOLTAGE AND HIGH RELIABILITY
HIGH SPEED SWITCHING, WIDE SOA

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



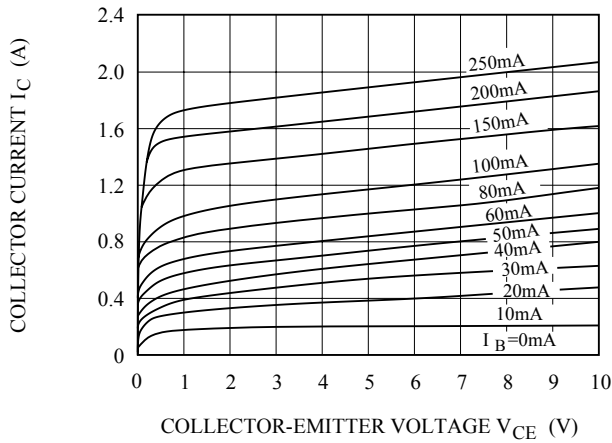
TO-220AB

ELECTRICAL CHARACTERISTICS (Ta=25°C)

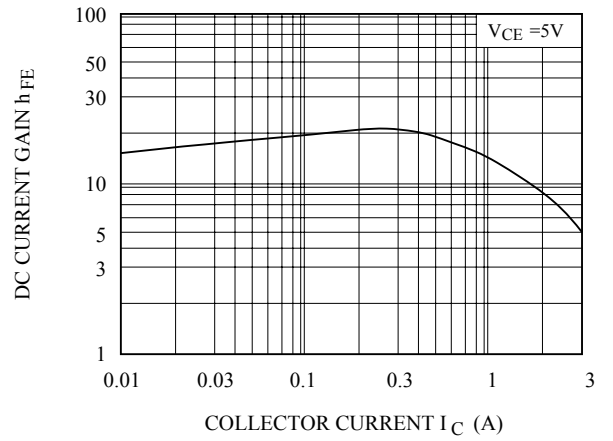
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	$V_{CB}=800V, I_E=0$	-	-	10	μA
Emitter Cut-off Current		I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	10	μA
Collector-Emitter Sustaining Voltage		$V_{CEX(SUS)}$	$I_C=1.5A, I_{B1}=-I_{B2}=0.3A$ $L=2mH, \text{Clamped}$	800	-	-	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}	$I_{B1}=0.4A, I_{B2}=-0.8A$ DUTY CYCLE ≤ 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

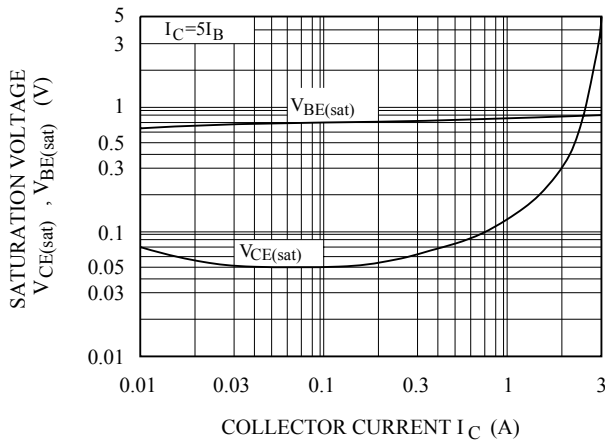
$I_C - V_{CE}$



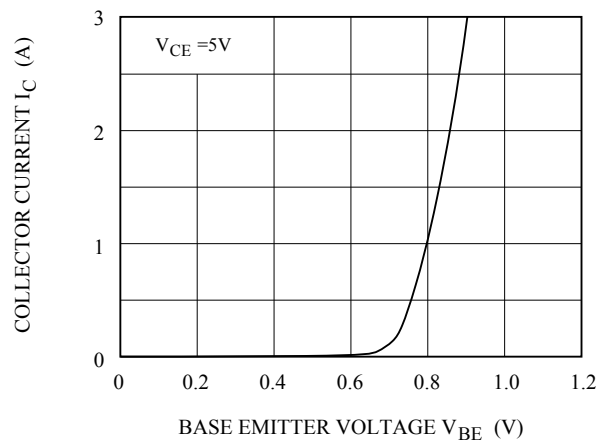
$h_{FE} - I_C$



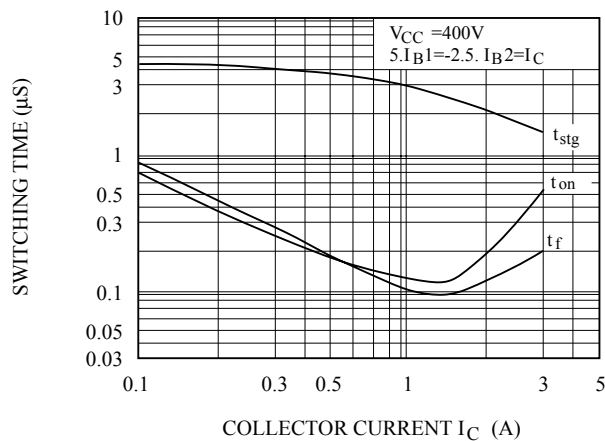
$V_{CE(sat)}, V_{BE(sat)} - I_C$



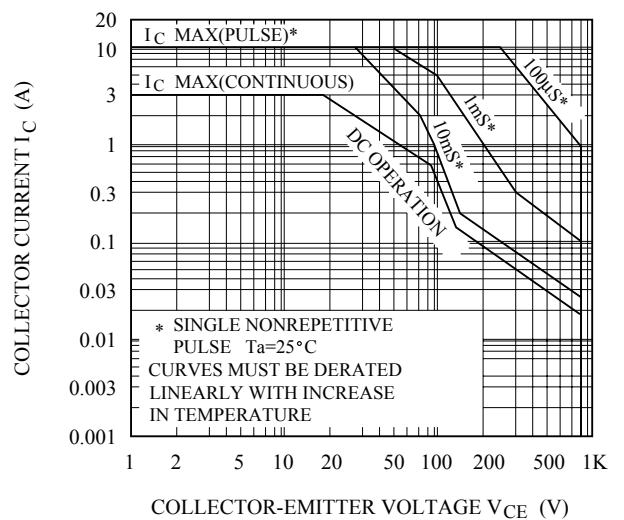
$I_C - V_{BE}$



SWITCHING CHARACTERISTICS

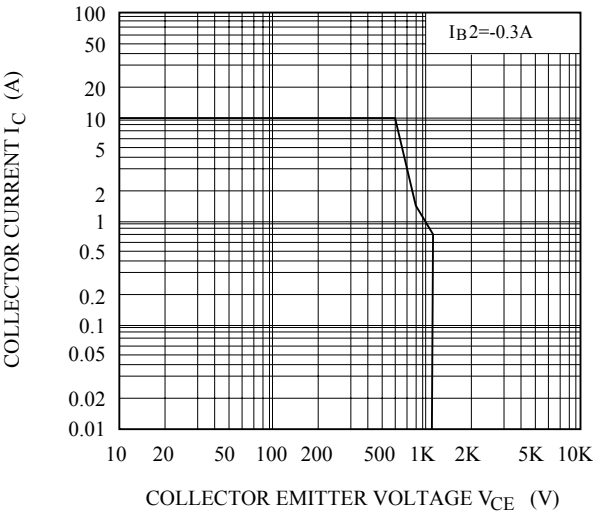


SAFE OPERATING AREA



KTC4527

REVERSE BIAS SAFE OPERATING AREA



$P_c - T_a$

