

LOW COLLECTOR SATURATION VOLTAGE
LARGE CURRENT

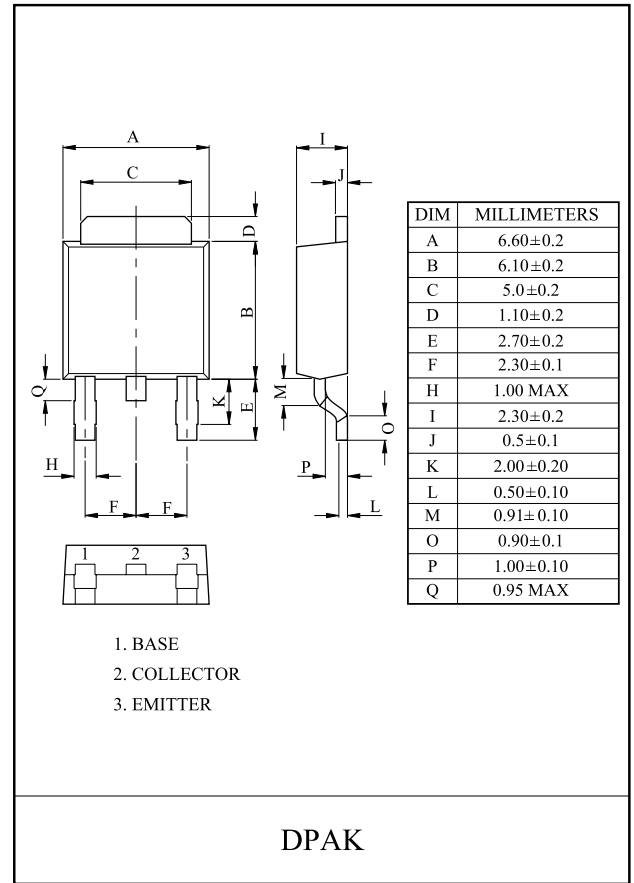
FEATURES

- High Power Dissipation : $P_C=1.3W(T_a=25^\circ\text{C})$
- Complementary to KTA1385D

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	60	V
Collector-Emitter Voltage		V_{CEO}	60	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	5	A
	Pulse *	I_{CP}	8	
Base Current		I_B	1	A
Collector Power Dissipation	$T_a=25^\circ\text{C}$	P_C	1.0	W
	$T_c=25^\circ\text{C}$		15	
Junction Temperature		T_j	150	
Storage Temperature Range		T_{stg}	-55 150	

* $PW \leq 10\text{ms}$, Duty Cycle $\leq 50\%$

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

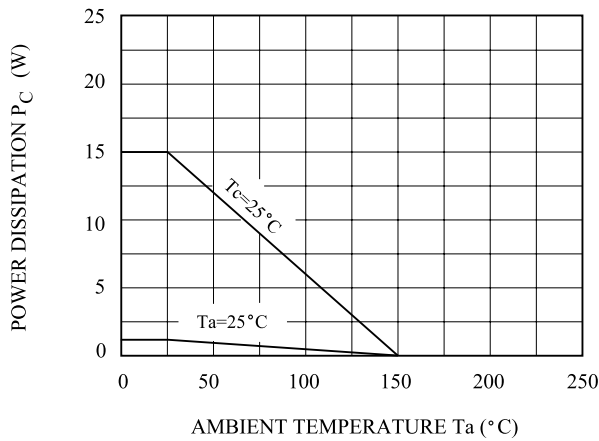
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} =50V, I _E =0	-	-	10	μA
Emitter Cut-off Current		I _{EBO}	V _{EB} =7V, I _C =0	-	-	10	μA
DC Current Gain	*	h _{FE} (1)	V _{CE} =1V, I _C =0.1A	60	-	-	
		h _{FE} (2) (Note)	V _{CE} =1V, I _C =2A	160	-	400	
		h _{FE} (3)	V _{CE} =2V, I _C =5A	50	-	-	
Collector-Emitter Saturation Voltage *		V _{CE(sat)}	I _C =2A, I _B =0.2A	-	0.1	0.3	V
Base-Emitter Saturation Voltage *		V _{BE(sat)}	I _C =2A, I _B =0.2A	-	0.9	1.2	V
Switching Time	Turn On Time	t _{on}	I_{B1}=-I_{B2}=0.2A DUTY CYCLE ≤ 1%	-	0.2	1	μS
	Storage Time	t _{stg}		-	1.1	2.5	
	Fall Time	t _f		-	0.2	1	

* Pulse test : $PW \leq 50 \mu S$, Duty Cycle $\leq 2\%$ Pulse

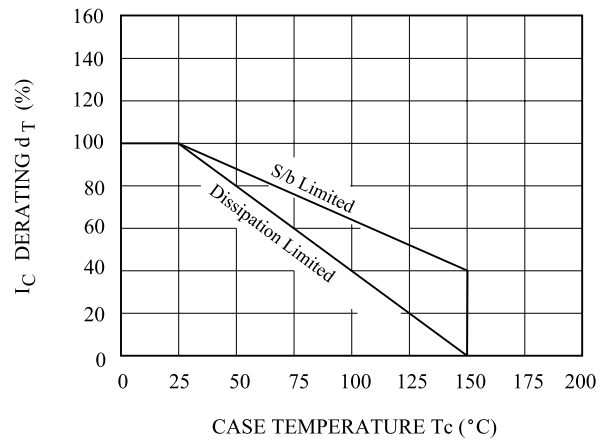
Note) $h_{FE}(2)$ Classification : O:160 320, Y:200 400.

KTC5103D

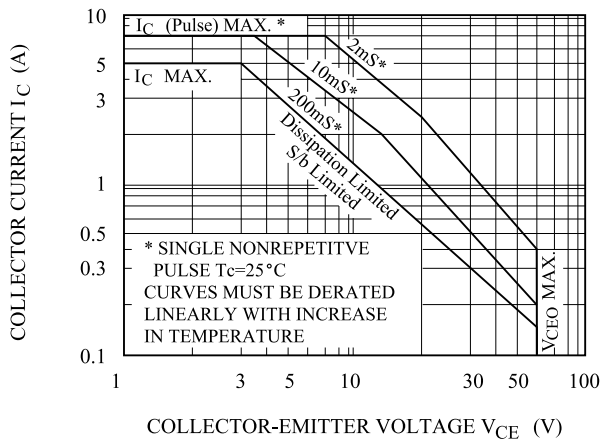
$P_C - T_a$



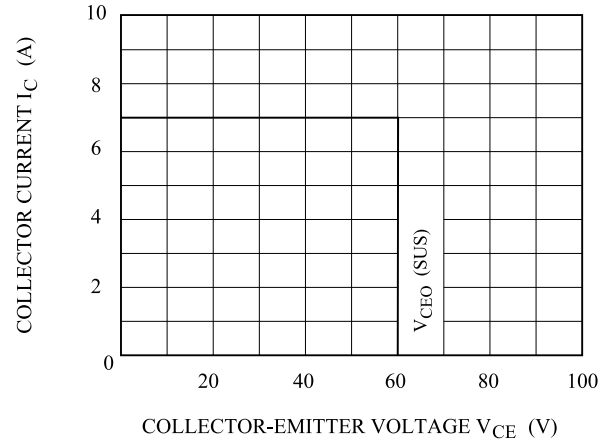
$d_T - T_C$



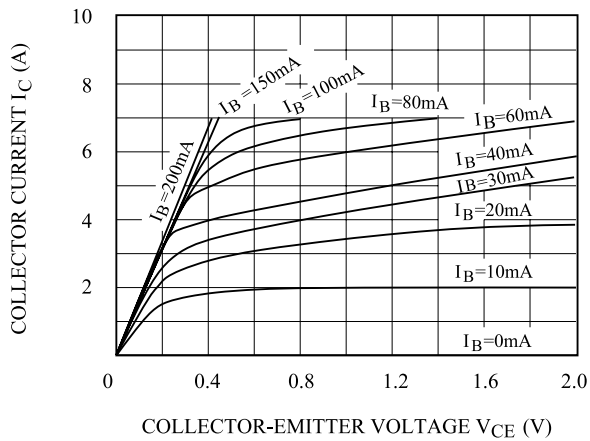
SAFE OPERATING AREA



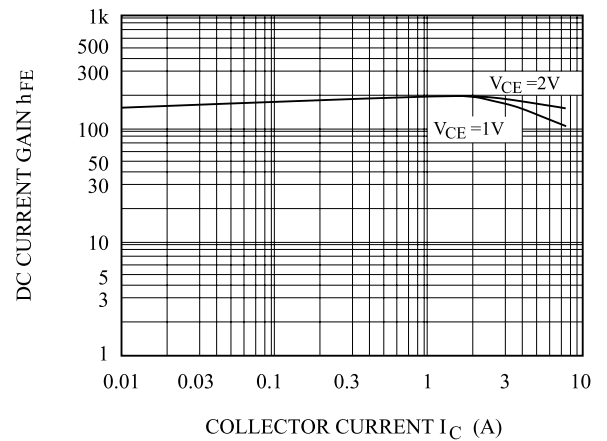
REVERSE BIAS
SAFE OPERATING AREA



$I_C - V_{CE}$



$h_{FE} - I_C$



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