

LOW COLLECTOR SATURATION VOLTAGE  
LARGE CURRENT

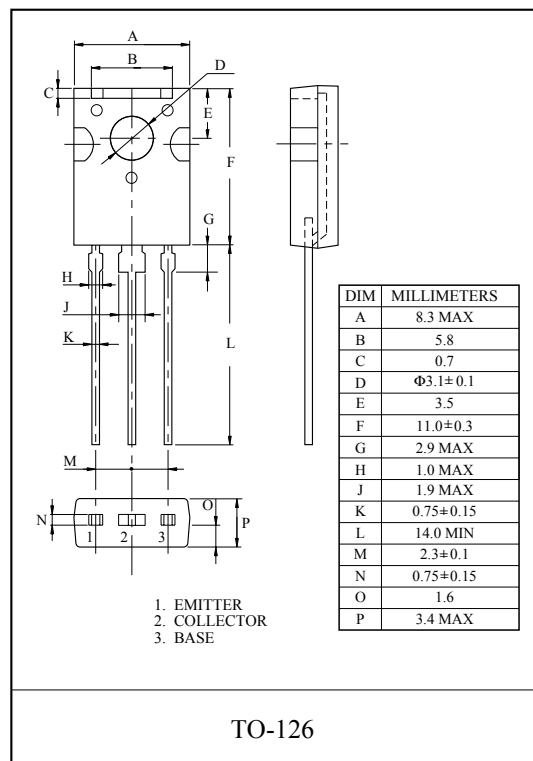
## FEATURES

- High Power Dissipation :  $P_C=1.5W(T_a=25^\circ C)$
- Complementary to KTB1151.

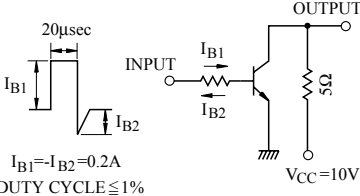
## MAXIMUM RATING ( $T_a=25^\circ C$ )

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	$T_a=25^\circ C$	$P_C$	1.5	W
	$T_c=25^\circ C$		20	
Junction Temperature		$T_j$	150	$^\circ C$
Storage Temperature Range		$T_{stg}$	-55 ~ 150	$^\circ C$

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



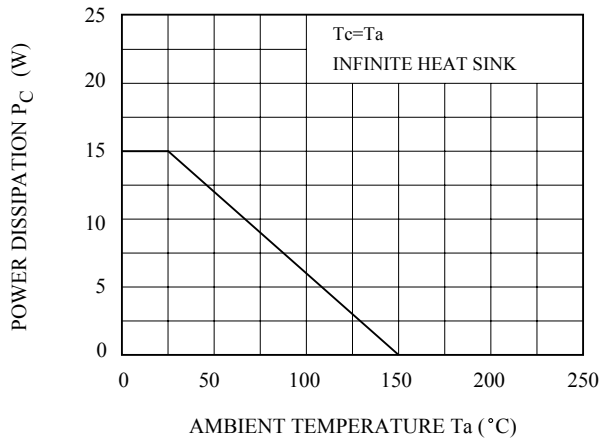
## ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

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

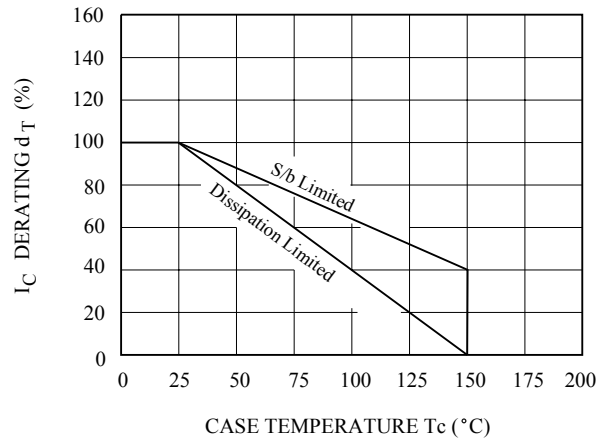
\* Pulse test :  $PW \leq 50\mu S$ , Duty Cycle  $\leq 2\%$  Pulse

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

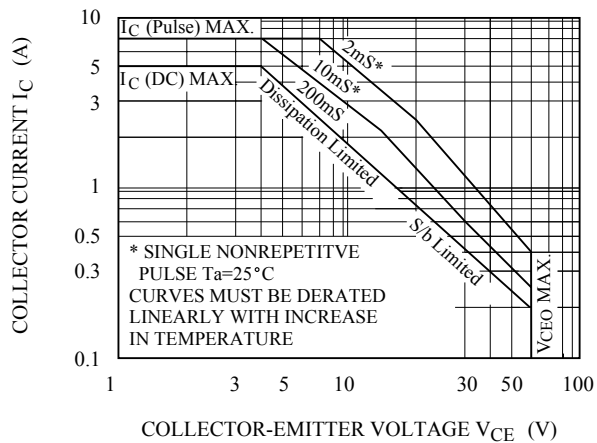
$P_C - T_a$



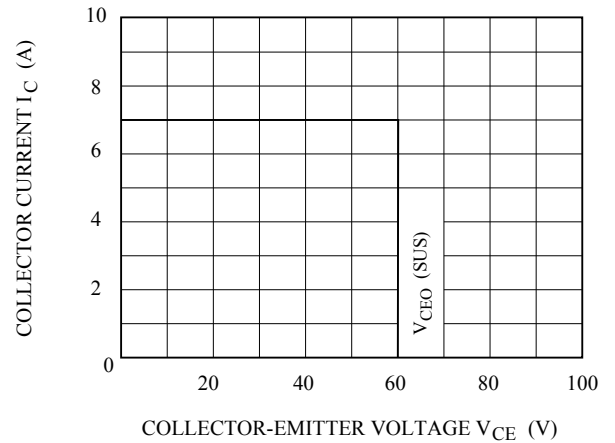
$d_T - T_C$



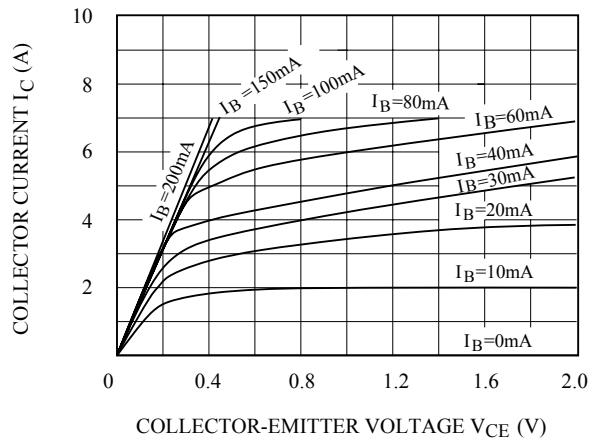
SAFE OPERATING AREA



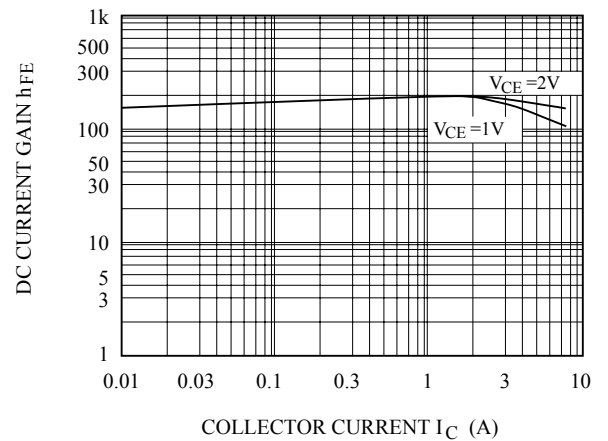
REVERSE BIAS  
SAFE OPERATING AREA

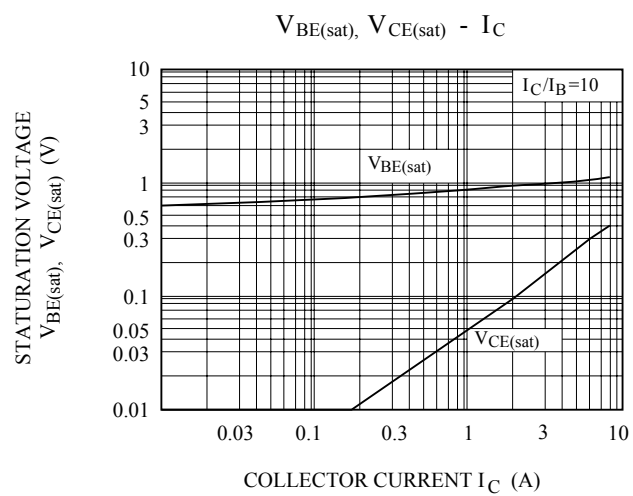


$I_C - V_{CE}$



$h_{FE} - I_C$





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