

LOW COLLECTOR SATURATION VOLTAGE  
LARGE CURRENT

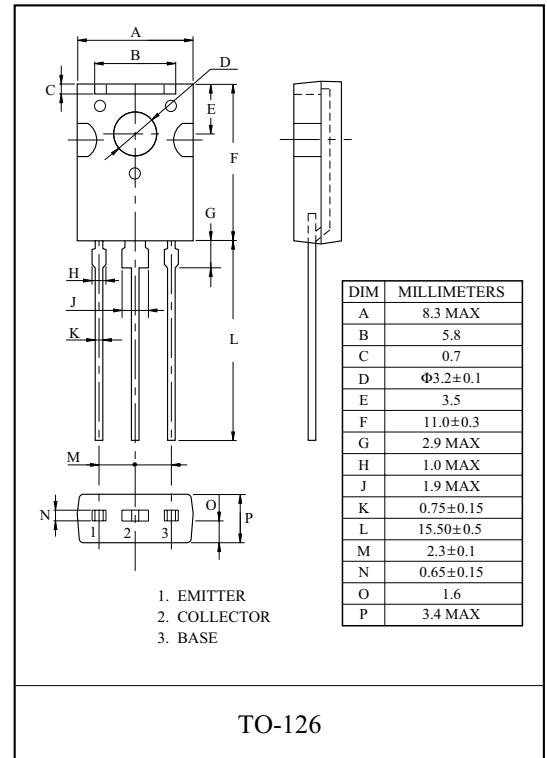
### FEATURES

- 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 ( $T_a=25^\circ C$ )

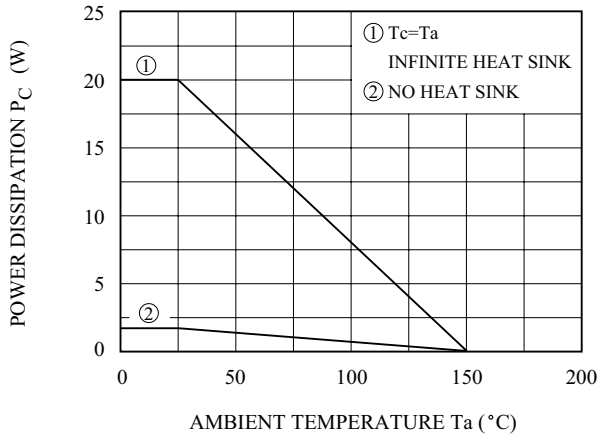
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=50V, I_E=0$	-	-	10	$\mu A$
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=7V, I_C=0$	-	-	10	$\mu A$
DC Current Gain		$h_{FE} 1$	$V_{CE}=1V, I_C=0.1A$	60	-	-	
	*	$h_{FE} 2$ (Note)	$V_{CE}=1V, I_C=2A$	160	-	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	$t_{on}$	<p><math>I_{B1} = -I_{B2} = 0.2A</math> DUTY CYCLE <math>\leq 1\%</math></p>	-	0.2	1	$\mu S$
	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

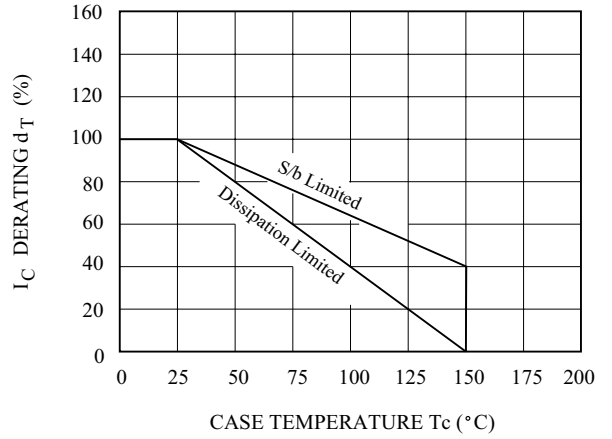
Note)  $h_{FE}(2)$  Classification : O:160 ~ 320, Y:200 ~ 400.

# KTD1691

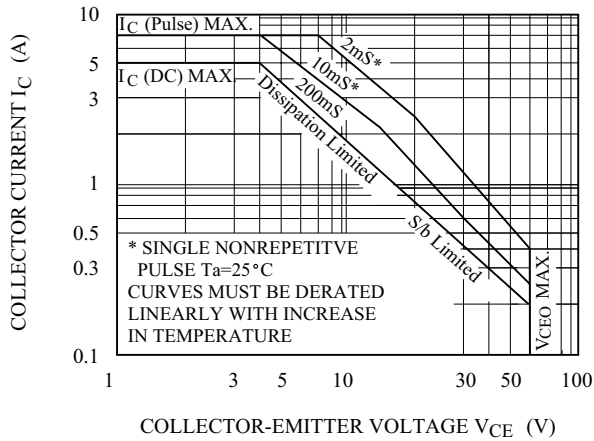
$P_c - T_a$



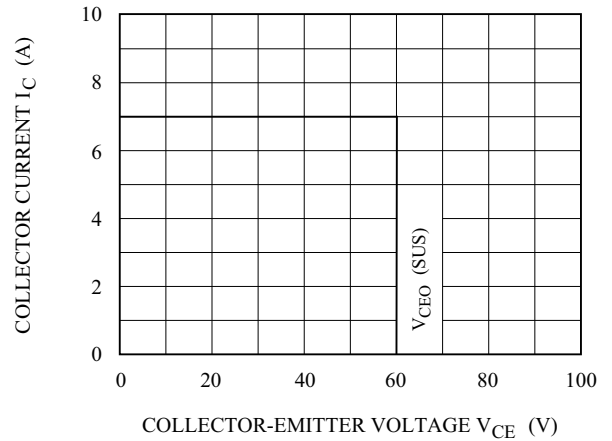
$d_T - T_c$



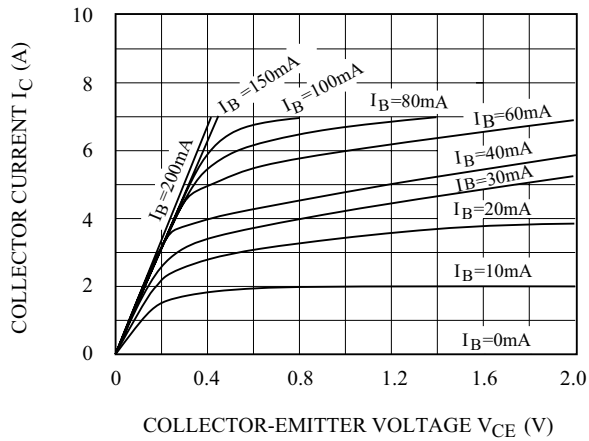
SAFE OPERATING AREA



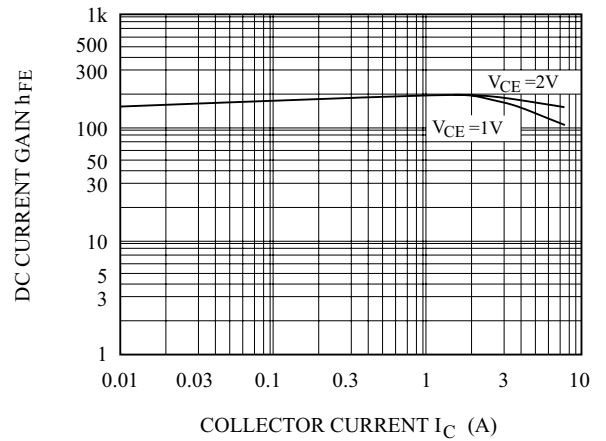
REVERSE BIAS SAFE OPERATING AREA



$I_c - V_{CE}$



$h_{FE} - I_c$



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