

LOW COLLECTOR SATURATION VOLTAGE LARGE CURRENT

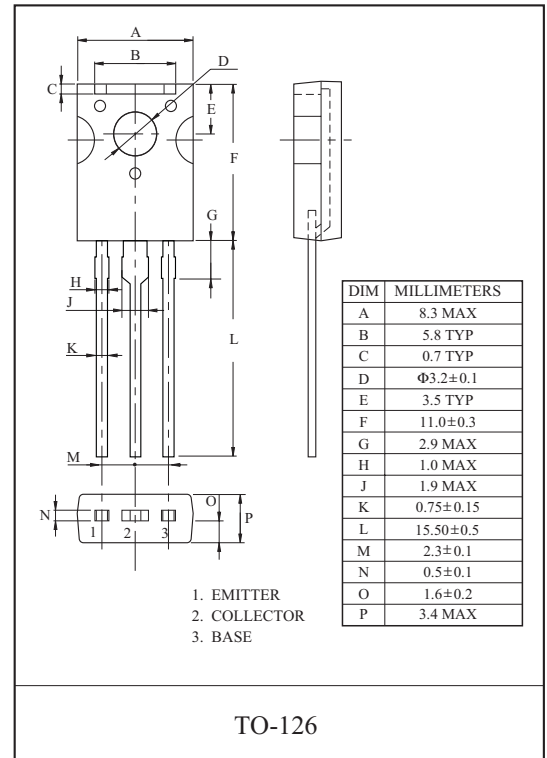
FEATURES

- High Power Dissipation : $P_C=1.5W(T_a=25^\circ C)$
- Complementary to KTB1151.
- Suffix U : Qualified to AEC-Q101.
ex) KTD1691-Y-U/PU

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
	Pulse *	I_{CP}	8
Base Current	I_B	1	A
Collector Power Dissipation	$T_a=25$	P_C	1.5
	$T_c=25$		20
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

* PW 10ms, Duty Cycle 50%



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

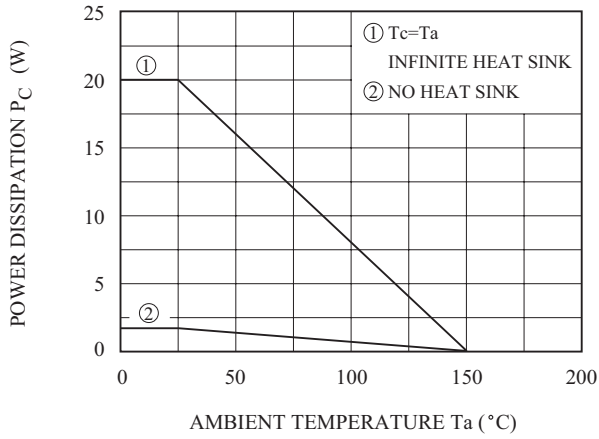
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V, I_E=0$	-	-	10	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=7V, I_C=0$	-	-	10	μA
DC Current Gain	$h_{FE} 1$	$V_{CE}=1V, I_C=0.1A$	60	-	-	
	$h_{FE} 2$ (Note)	$V_{CE}=1V, I_C=2A$	160	-	400	
	$h_{FE} 3$	$V_{CE}=2V, I_C=5A$	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}	-	0.2	1	μS
	Storage Time	t_{stg}	-	1.1	2.5	
	Fall Time	t_f	-	0.2	1	

* Pulse test : PW 50 μS , Duty Cycle 2% Pulse

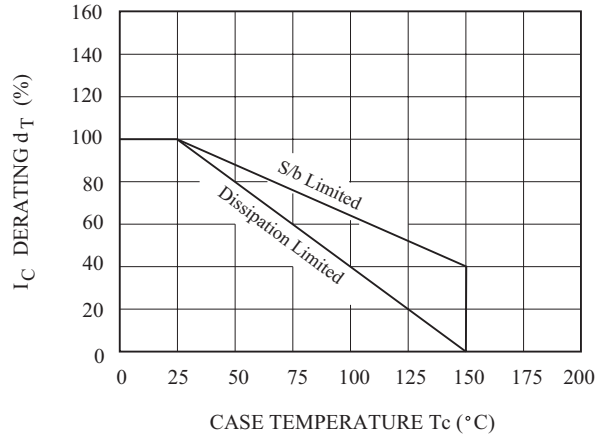
Note) $h_{FE}(2)$ Classification : O:160 320, Y:200 400.

KTD1691

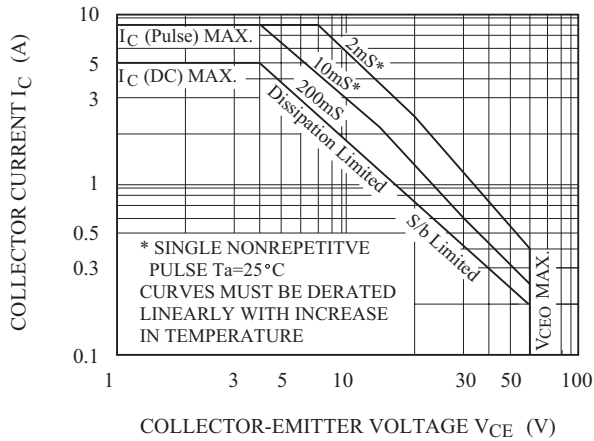
Pc - Ta



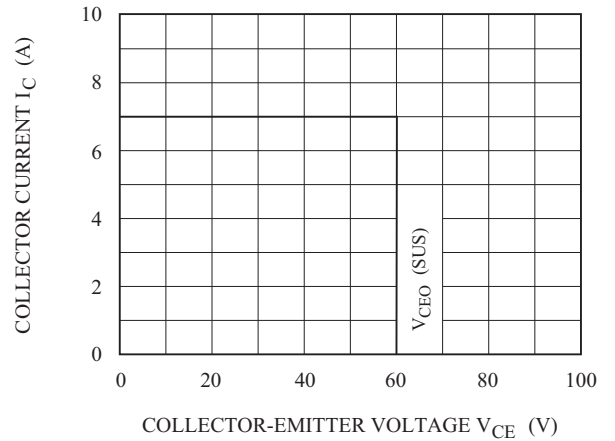
$d_T - T_C$



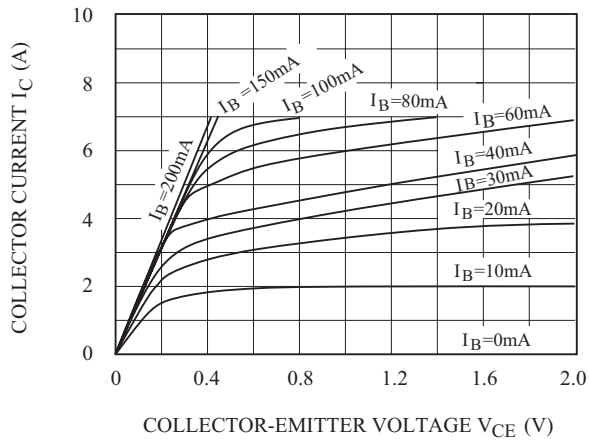
SAFE OPERATING AREA



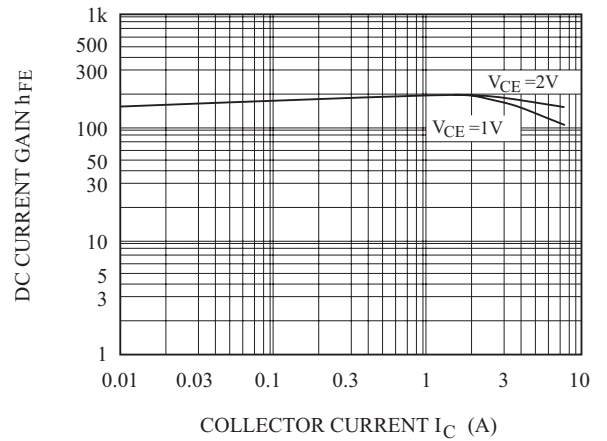
REVERSE BIAS SAFE OPERATING AREA



$I_C - V_{CE}$



$h_{FE} - I_C$



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