

**LOW COLLECTOR SATURATION VOLTAGE  
LARGE CURRENT**

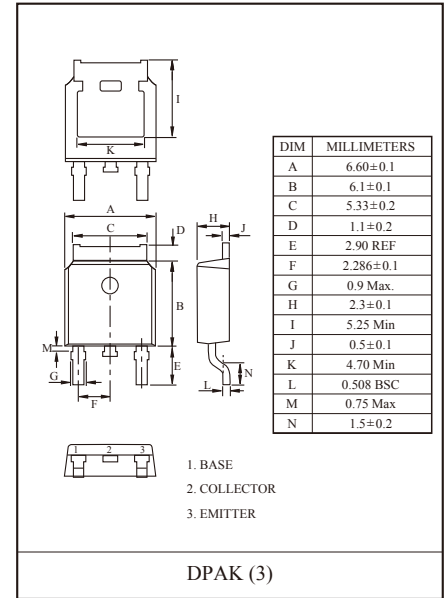
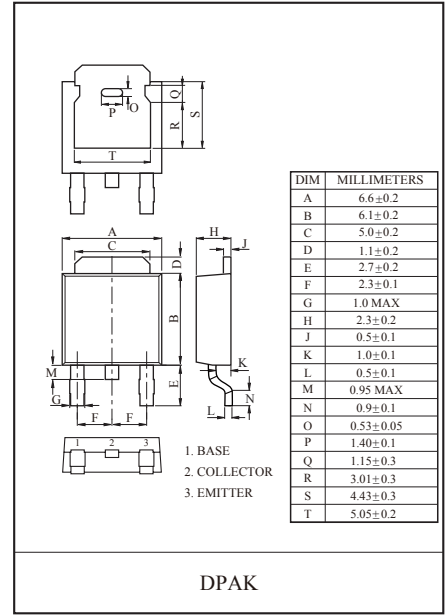
**FEATURES**

- Complementary to KTA1385D
- Suffix U : Qualified to AEC-Q 101  
ex) KTC5103D-O-RTF/HU

**MAXIMUM RATING (Ta=25 °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	Ta=25°C	$P_C$	1.0	W
	Tc=25°C		15	
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C

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



**ELECTRICAL CHARACTERISTICS (Ta=25°C)**

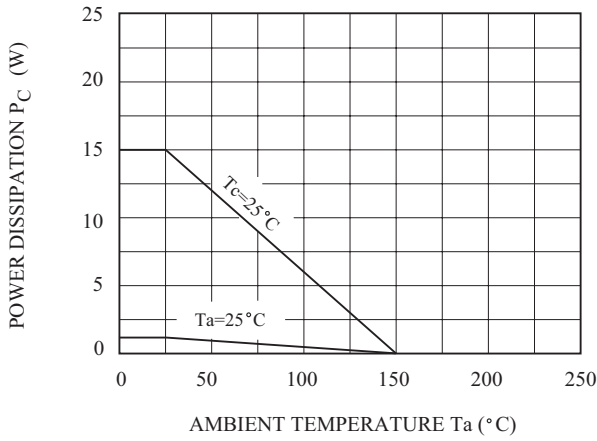
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		$I_{CBO}$	$V_{CB}=50V, I_E=0$	-	-	10	μA
Emitter Cut-off Current		$I_{EBO}$	$V_{EB}=7V, I_C=0$	-	-	10	μA
DC Current Gain	*	$h_{FE}(1)$	$V_{CE}=1V, I_C=0.1A$	60	-	-	
		$h_{FE}(2)$ (Note)	$V_{CE}=1V, I_C=2A$	160	-	400	
		$h_{FE}(3)$	$V_{CE}=2V, I_C=5A$	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	$t_{on}$	<p><math>I_{B1}=I_{B2}=0.2A</math> DUTY CYCLE ≤ 1%</p>	-	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 ≤ 2% Pulse

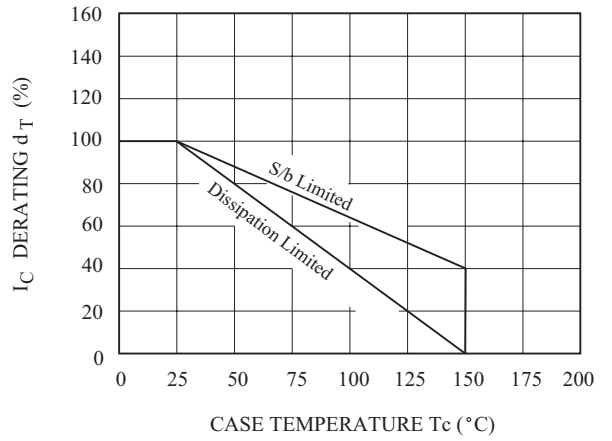
Note)  $h_{FE}(2)$  Classification : O:160 ~ 320, Y:200 ~ 400.

# KTC5103D

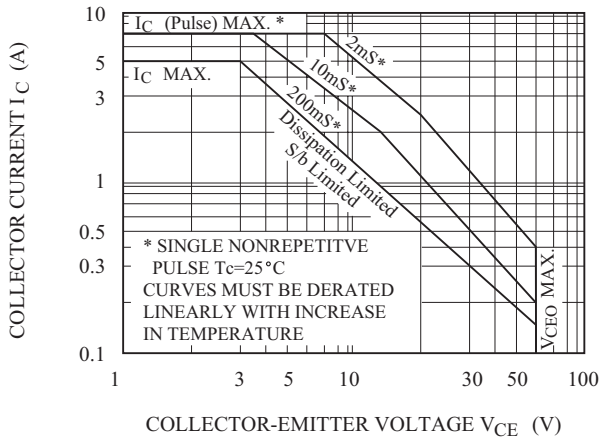
Pc - Ta



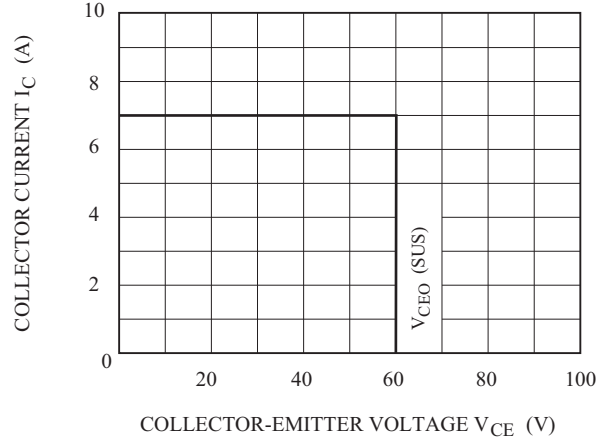
$d_T - T_c$



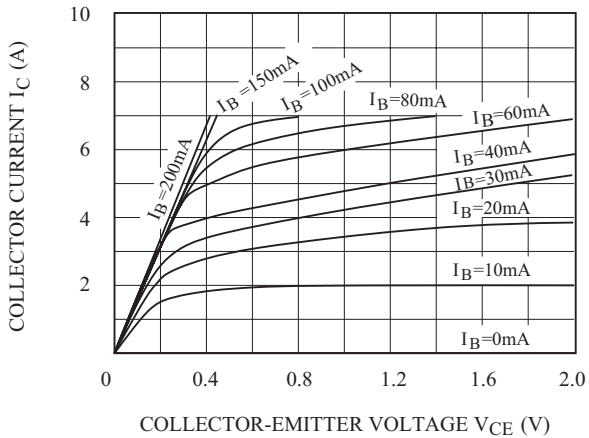
SAFE OPERATING AREA



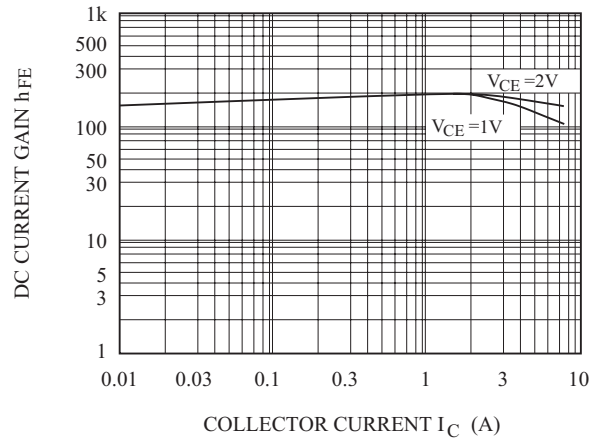
REVERSE BIAS SAFE OPERATING AREA



$I_c - V_{CE}$



$h_{FE} - I_c$



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