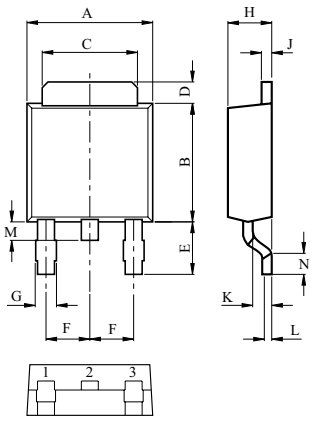
KTC2825D

EPITAXIAL PLANAR NPN TRANSISTOR

LED DRIVE APPLICATION

FEATURES

- Adoption of MBIT processes.
- Low collector-to-emitter saturation voltage.
- Fast switching speed.



DIM	MILLIMETERS
A	6.6±0.2
B	6.1±0.2
C	5.0±0.2
D	1.1±0.2
E	2.7±0.2
F	2.3±0.1
G	1.0 MAX
H	2.3±0.2
J	0.5±0.1
K	1.0±0.1
L	0.5±0.1
M	0.95 MAX
N	0.9±0.1

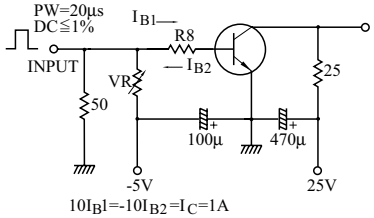
1. BASE
2. COLLECTOR
3. EMITTER

DPAK

MAXIMUM RATING (Ta=25℃)

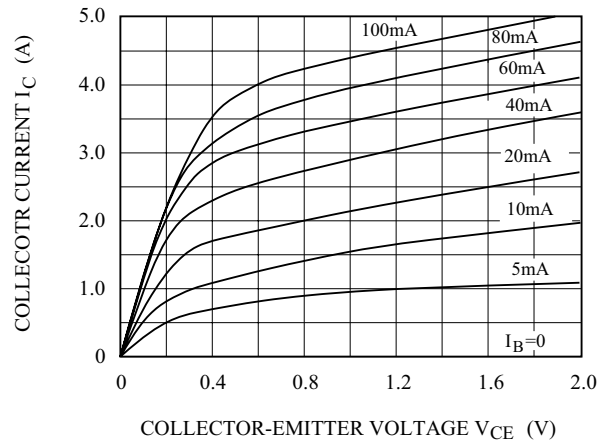
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	60	V
Vollector-Emitter Voltage		V_{CEO}	60	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current		I_C	3	A
Collector Current(Pulse)		I_{CP}	6	A
Base Current		I_B	600	mA
Collector Power Dissipation	T_a=25℃	P_C	1	W
	T_C=25℃	P_C	15	W
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

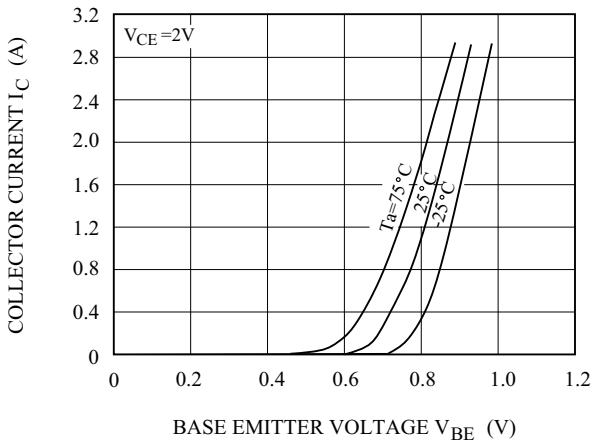
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT.
Collector Cut-off Current		I_{CBO}	V_{CB}=40V, I_E=0	-	-	1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=4V, I_C=0	-	-	1	μA
DC Current Gain		h_{FE}(1)	V_{CE}=2V, I_C=100mA	200	-	400	
		h_{FE}(2)	V_{CE}=2V, I_C=3A	35	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)\ (1)}$	I_C=2A, I_B=100mA	-	0.19	0.5	V
		$V_{CE(sat)\ (2)}$	I_C=360mA, I_B=2mA	-	-	0.3	
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=2A, I_B=100mA	-	0.94	1.2	V
Collector Output Capacitance		C_{ob}	V_{CB}=10V, f=1MHz, I_E=0	-	25	-	pF
Switching Time	Turn-on Time	t_{on}		-	35	-	nS
	Storage Time	t_{stg}		-	470	-	
	Fall Time	t_f		-	90	-	

$10I_{B1}$=$-10I_{B2}$=I_C=1A

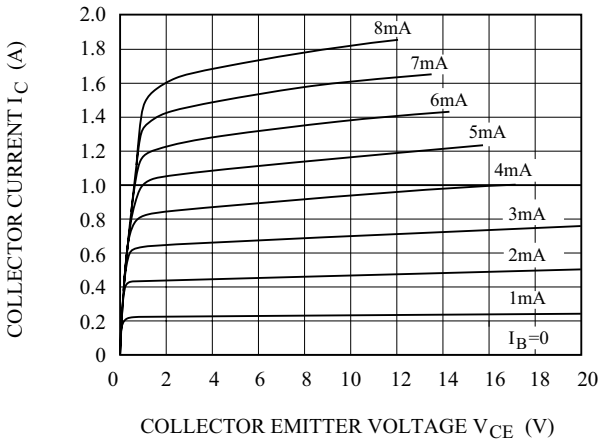
I_C - V_{CE}



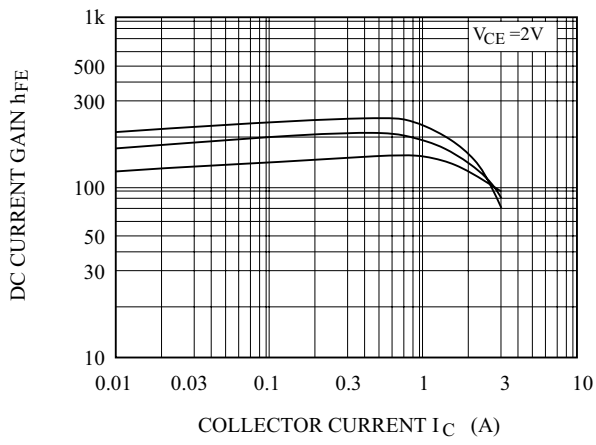
I_C - V_{BE}



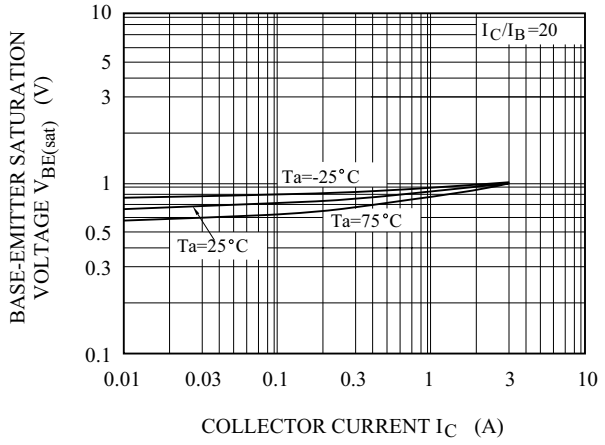
I_C - V_{CE}



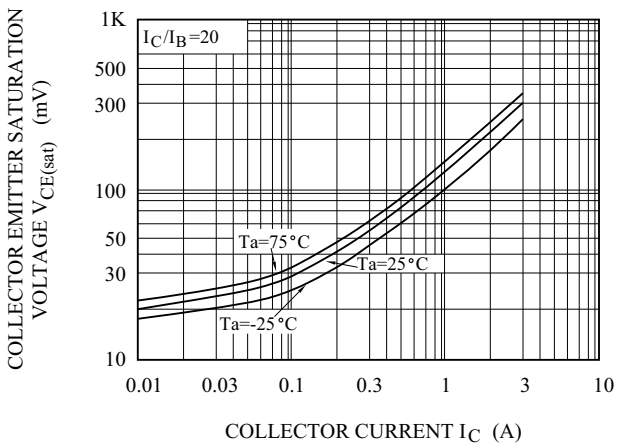
h_{FE} - I_C



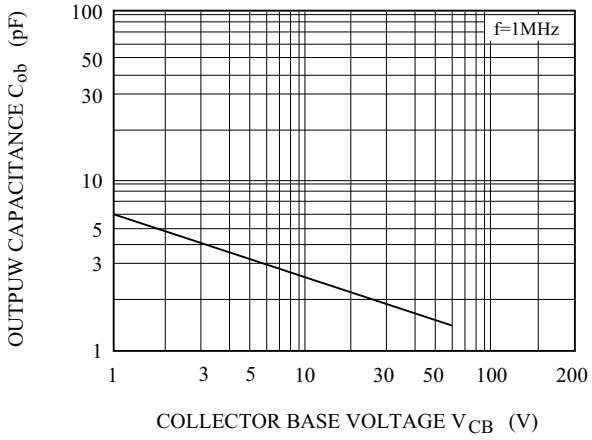
$V_{BE(sat)}$ - I_C



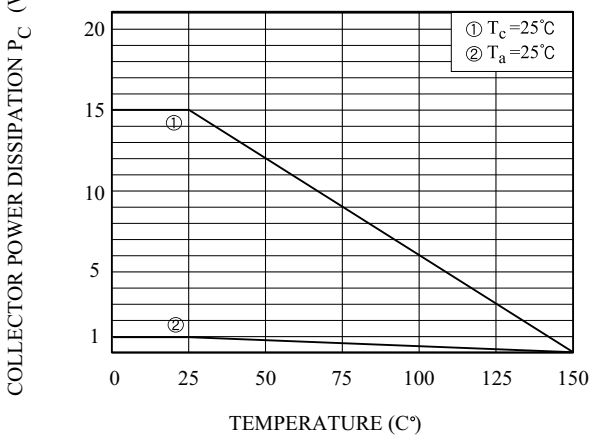
$V_{CE(sat)}$ - I_C



C_{ob} - V_{CB}


OUTPUW CAPACITANCE C_{ob} (pF)
100
50
30
10
5
3
1
f=1MHz
1
3
5
10
30
50
100
200
COLLECTOR BASE VOLTAGE V_{CB} (V)

P_C - T_C


COLLECTOR POWER DISSIPATION P_C (W)
20
15
10
5
1
① T_c =25℃
② T_a =25℃
①
②
0
25
50
75
100
125
150
TEMPERATURE (C°)