KEC

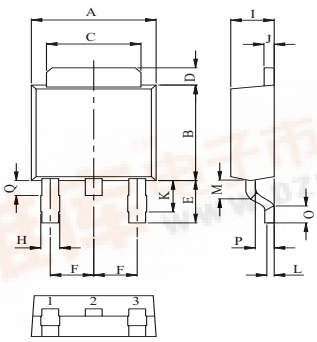
SEMICONDUCTOR
TECHNICAL DATA

KTC2020D/L
EPITAXIAL PLANAR NPN TRANSISTOR

GENERAL PURPOSE APPLICATION.
DPAK FOR SVRFACE MOUNT APPLICATIONS.

FEATURES

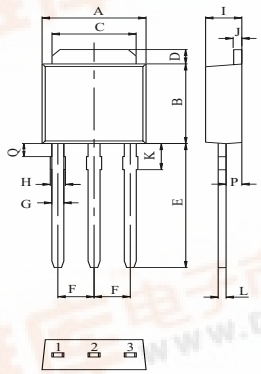
· Low Collector Saturation Voltage
: $V_{CE(sat)}$=1.0V(Max.) at I_C=2A, I_B=0.2A.
· Straight Lead (IPAK, "L" Suffix)
· Complementary to KTA1040D/L.



DIM	MILLIMETERS
A	6.60±0.2
B	6.10±0.2
C	5.0±0.2
D	1.10±0.2
E	2.70±0.2
F	2.30±0.1
H	1.00 MAX
I	2.30±0.2
J	0.5±0.1
K	2.00±0.20
L	0.50±0.10
M	0.91±0.10
O	0.90±0.1
P	1.00±0.10
Q	0.95 MAX

1. BASE
2. COLLECTOR
3. EMITTER

DPAK



DIM	MILLIMETERS
A	6.60±0.2
B	6.10±0.2
C	5.0±0.2
D	1.10±0.2
E	9.50±0.6
F	2.30±0.1
G	0.76±0.1
H	1.0 MAX
I	2.30±0.2
J	0.5±0.1
K	2.0±0.2
L	0.50±0.1
P	1.0±0.1
Q	0.90 MAX

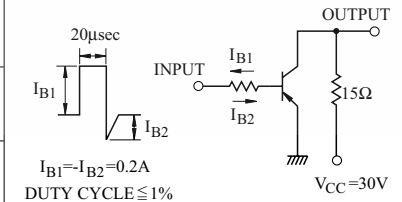
1. BASE
2. COLLECTOR
3. EMITTER

IPAK

MAXIMUM RATING (Ta=25℃)

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		I_C	3	A
Base Current		I_B	0.5	A
Collector Power Dissipation	Ta=25℃	P_C	1.0	W
	Tc=25℃		20	
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55～150	℃

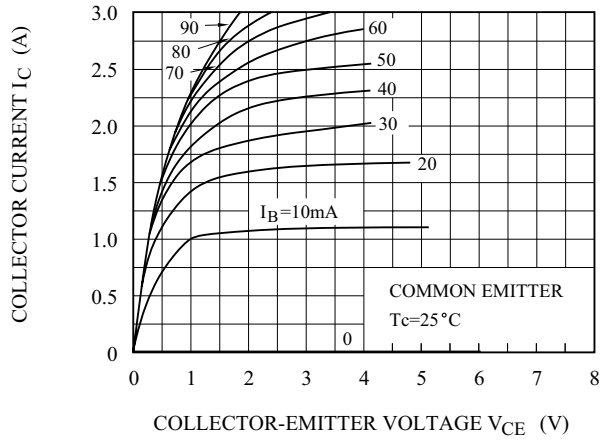
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=60V, I_E=0	-	-	100	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=7V, I_C=0	-	-	100	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=50mA, I_B=0	60	-	-	V
DC Current Gain		h_{FE} (Note)	V_{CE}=5V, I_C=0.5A	100	-	300	-
Collector Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=2A, I_B=0.2A	-	0.5	1.0	V
Base-Emitter Voltage		V_{BE}	V_{CE}=5V, I_C=0.5A	-	0.7	1.0	V
Transition Frequency		f_T	V_{CE}=5V, I_C=0.5A	-	30	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	35	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.65	-	μS
	Storage Time	t_{stg}		-	1.3	-	
	Fall Time	t_f		-	0.65	-	

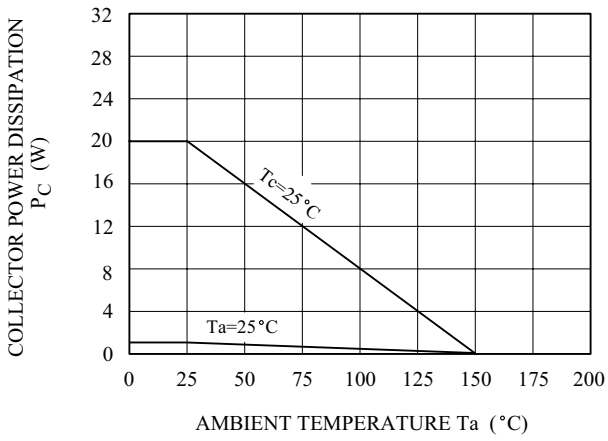
Note: h_{FE} Classification Y:100~200, GR:150~300.

KTC2020D/L

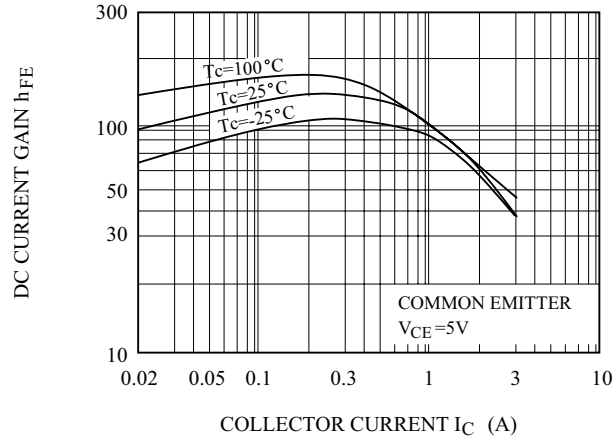
I_C - V_{CE}



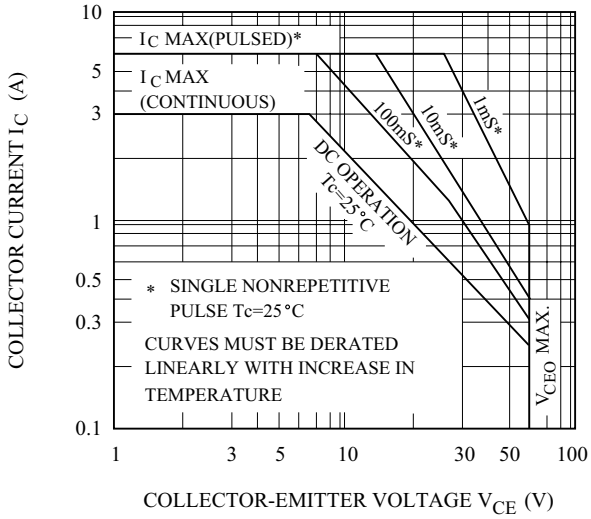
Pc - Ta



h_{FE} - I_C



SAFE OPERATING AREA



$V_{CE(sat)}$ - I_C