KEC

SEMICONDUCTOR
TECHNICAL DATA

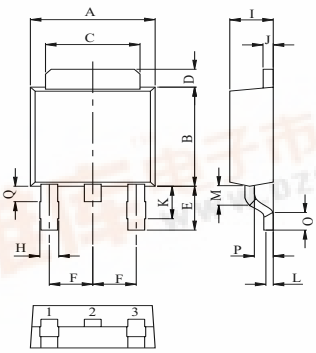
KTC2022D/L
EPITAXIAL PLANAR NPN TRANSISTOR

GENERAL PURPOSE APPLICATION.

FEATURES

· Low Collector-Emitter Saturation Voltage
: $V_{CE(sat)}$=-2.0V(Max.).

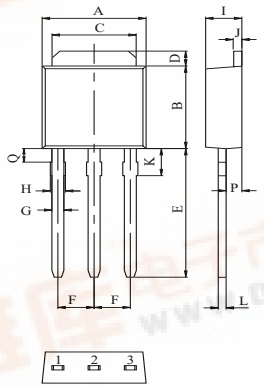
· Complementary to KTA1042D/L.



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℃)

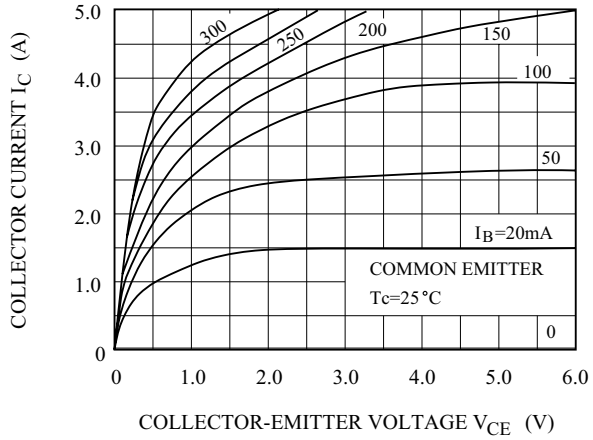
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	100	V
Collector-Emitter Voltage	V_{CEO}	100	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	5	A
Base Current	I_B	0.5	A
Collector Power Dissipation (Tc=25℃)	P_C	20	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55 ~150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

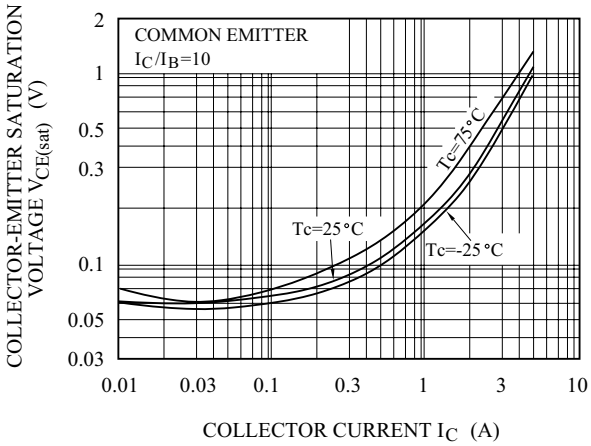
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=100V, I_E=0	-	-	100	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	1.0	mA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=50mA, I_B=0	100	-	-	V
DC Current Gain	h_{FE}(1) (Note)	V_{CE}=5V, I_C=1A	70	-	240	
	h_{FE}(2)	V_{CE}=5V, I_C=4A	20	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=4A, I_B=0.4A	-	-	2.0	V
Base-Emitter Voltage	V_{BE}	V_{CE}=5V, I_C=1A	-	-	1.5	V
Transition Frequency	f_T	V_{CE}=5V, I_C=1A	-	30	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	40	-	pF

Note : h_{FE}(1) Classification 0:70~140, Y:120~240.

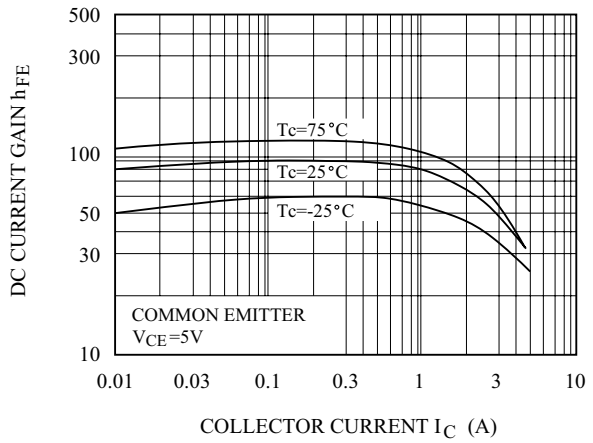
I_C - V_{CE}



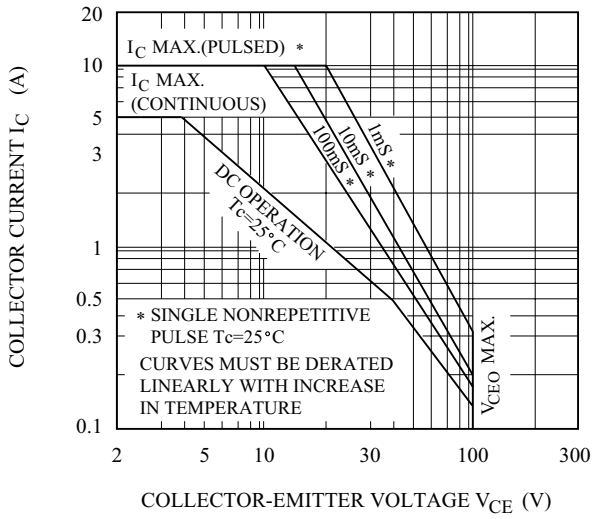
$V_{CE(sat)}$ - I_C



h_{FE} - I_C



SAFE OPERATING AREA



Pc - Ta