KTA1204D/L

EPITAXIAL PLANAR PNP TRANSISTOR

HIGH CURRENT SWITCHING APPLICATION.

APPLICATION

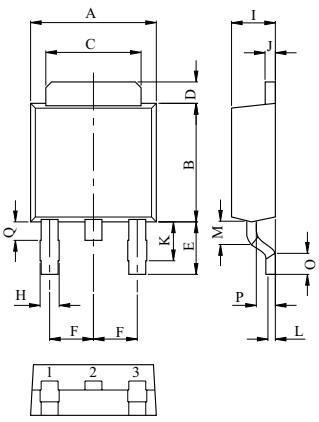
Relay drivers, high-speed inverters, converters, and other general high-current switching applications.

FEATURES

· Low Collector Emitter Saturation Voltage.
  : $V_{CE(sat)}$=-0.4V(Max.) (I_C=-4A)
· High Current and High f_T
  : I_C=-8A, f_T=130MHz.
· Excellent Linearity of h_{FE}
· High Speed Switching Time.
  : f_T=20nS (Typ.)
· Complementary to KTC1804D/L

MAXIMUM RATING (Ta=25℃)

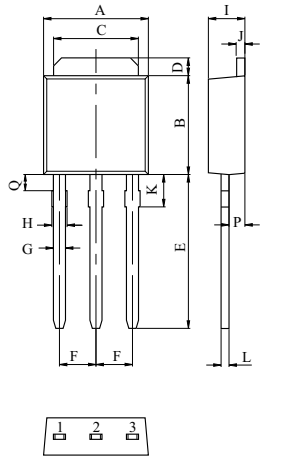
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	-60	V
Collector-Emitter Voltage		V_{CEO}	-60	V
Emitter-Base Voltag		V_{EBO}	-6	V
Collector Current	DC	I_C	-8	A
	Pulse	I_{CP}	-12	
Collector Power Dissipation	Ta=25℃	P_C	1.0	W
	Tc=25℃		20	
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55～150	℃



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
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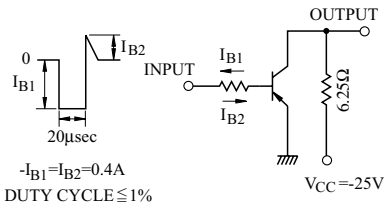
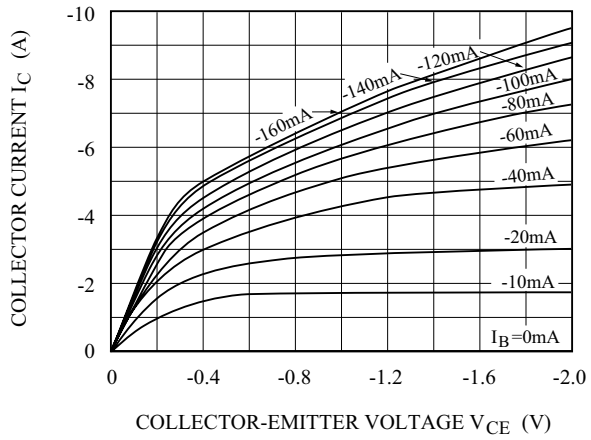
IPAK

ELECTRICAL CHARACTERISTICS (Ta=25℃)

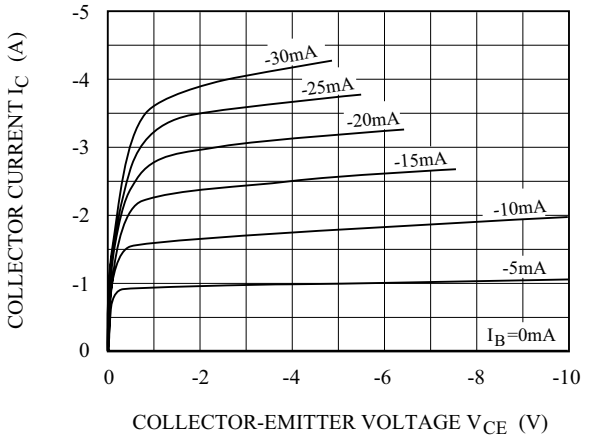
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=-40V, I_E=0	-	-	-1	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=-4V, I_C=0	-	-	-1	μA
DC Current Gain		h_{FE} (1) (Note)	V_{CE}=-2V, I_C=-0.5A	100	-	400	
		h_{FE} (2)	V_{CE}=-2V, I_C=-6A	35	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=-4A, I_B=-0.2A	-	-250	-500	mV
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=-4A, I_B=-0.2A	-	-0.95	-1.3	mV
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	I_C=-10μA, I_E=0	-60			V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=-1mA, R_{BE}=∞	-50			V
Emitter-base Breakdown Voltage		$V_{(BR)EBO}$	I_E=-10μA, I_C=0	-6	-	-	V
Gain-Bandwidth Product		f_T	V_{CE}=-5V, I_C=-1A	-	130	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	95	-	pF
Switching Time	Turn On Time	t_{on}		-	50	-	nS
	Storage Time	t_{stg}		-	450	-	
	Fall Time	t_f		-	20	-	

Note : h_{FE} Classification O:100~200, Y:140~280, GR:200~400.

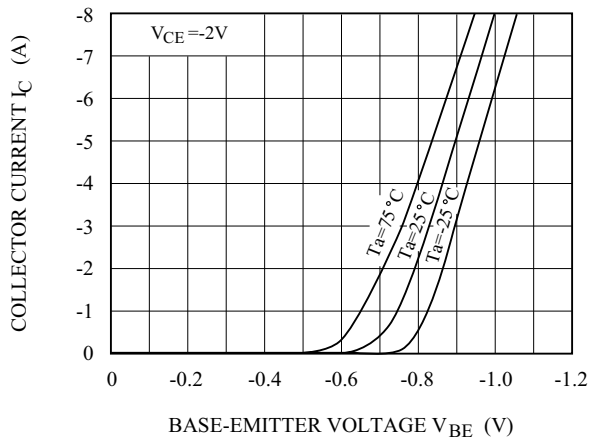
I_C - V_{CE}



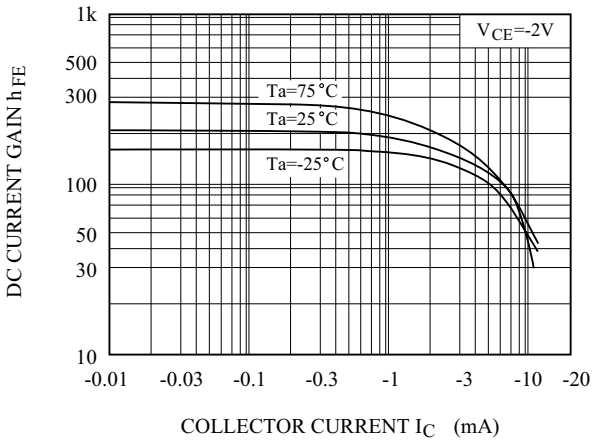
I_C - V_{CE}



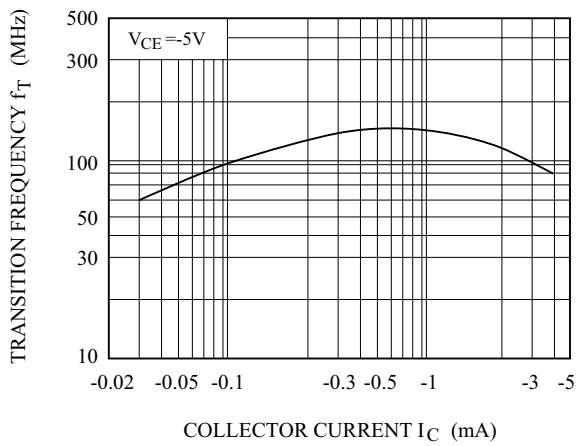
I_C - V_{BE}



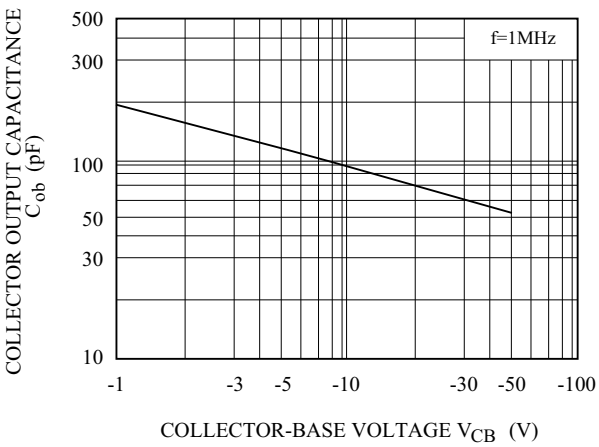
h_{FE} - I_C



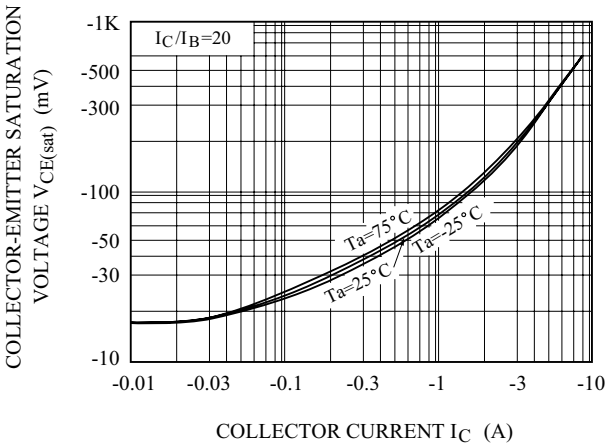
f_T - I_C



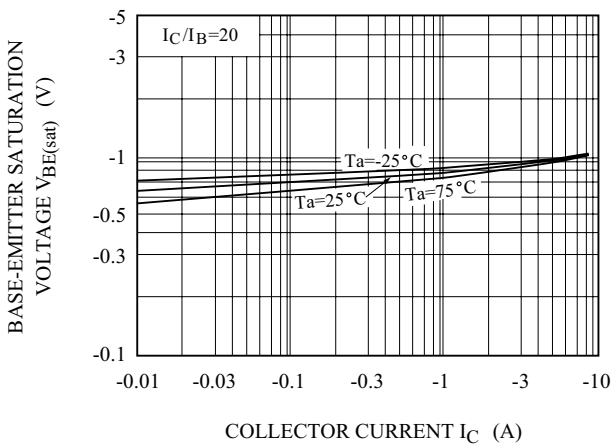
C_{ob} - V_{CB}



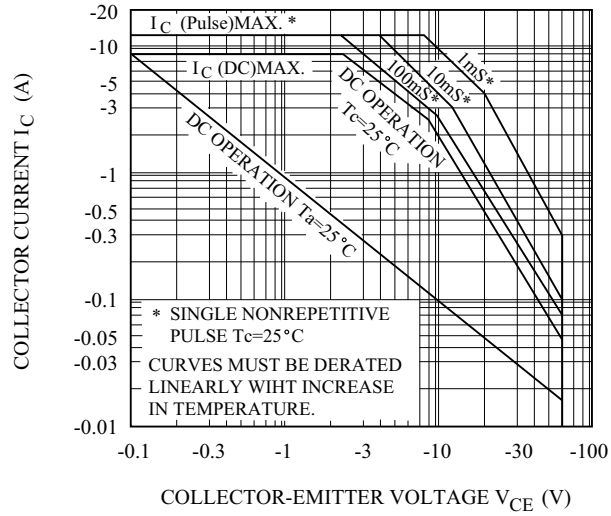
$V_{CE(sat)}$ - I_C



$V_{BE(sat)}$ - I_C



SAFE OPERATING AREA



Pc - Ta