

HIGH CURRENT SWITCHING APPLICATION.

### APPLICATION

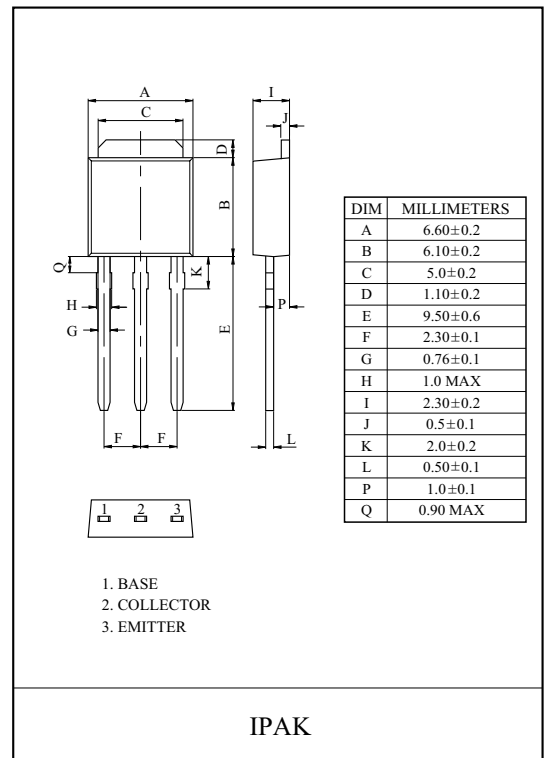
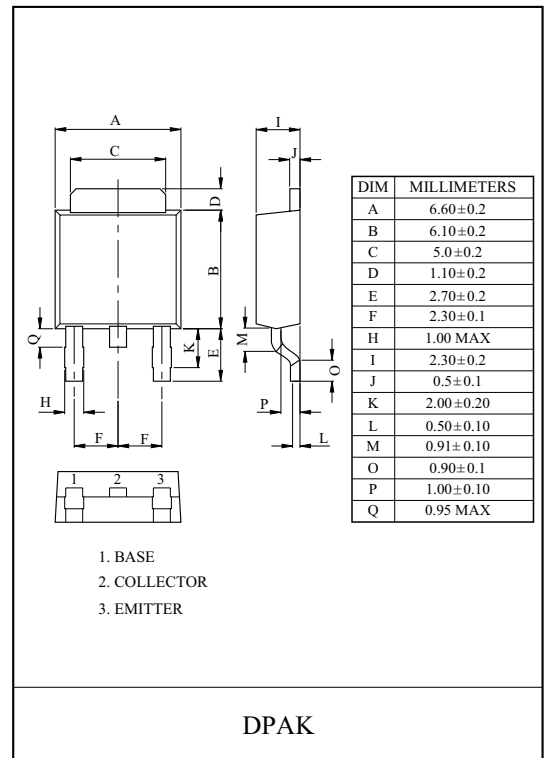
Relay drivers, high-speed inverters, converters, and other general high-current switching applications.

### FEATURES

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

### 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		$V_{EBO}$	-6	V
Collector Current	DC	$I_C$	-8	A
	Pulse	$I_{CP}$	-12	
Collector Power Dissipation	Ta=25 °C	$P_C$	1.0	W
	Tc=25 °C		20	
Junction Temperature		$T_j$	150	°C
Storage Temperature Range		$T_{stg}$	-55 ~ 150	°C



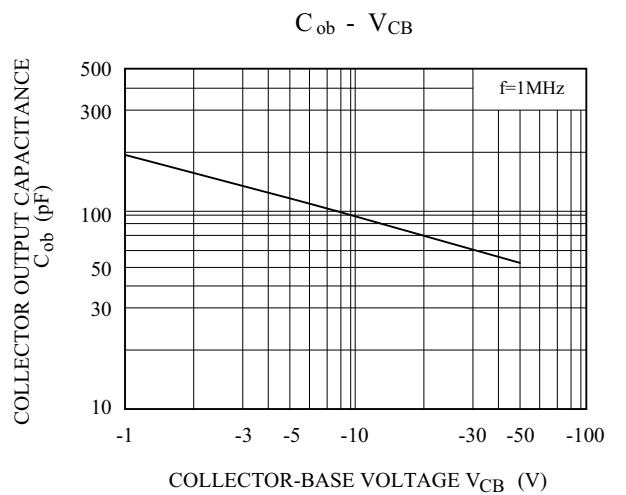
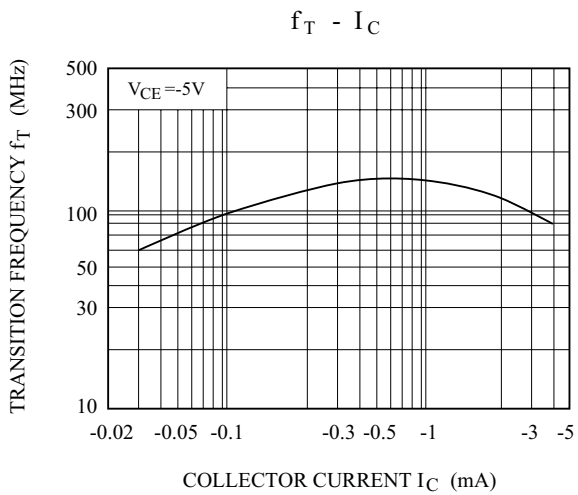
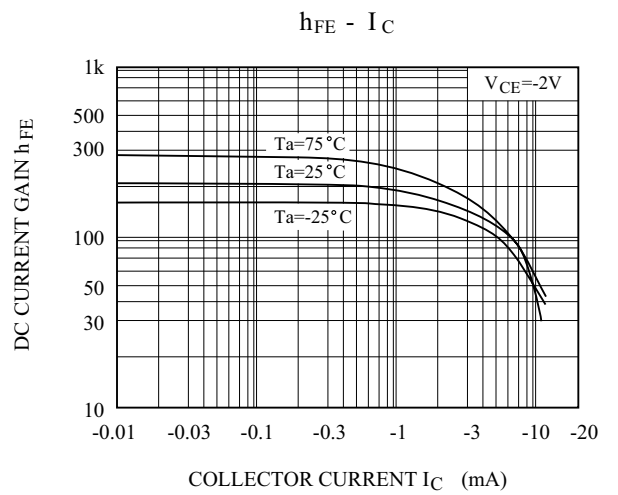
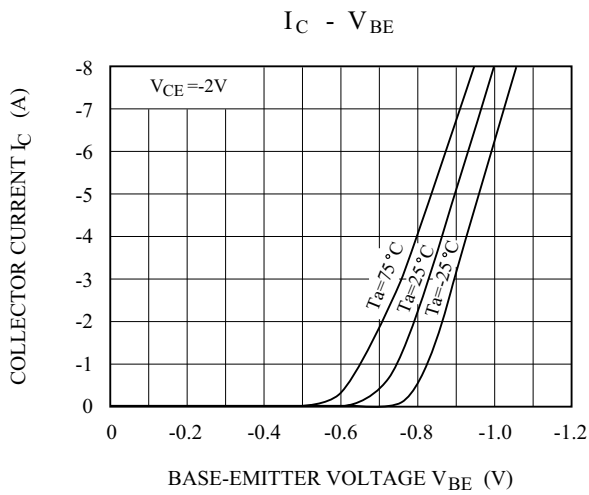
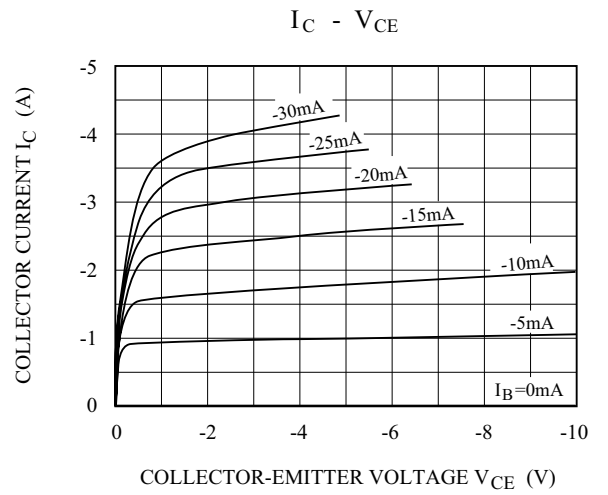
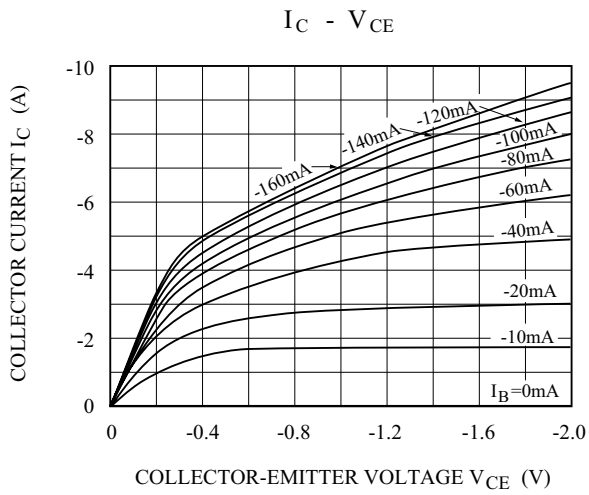
# KTA1204D/L

## ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT				
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=-40V, I_E=0$	-	-	-1	$\mu A$				
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=-4V, I_C=0$	-	-	-1	$\mu A$				
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	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-60			V				
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1mA, R_{BE}=\infty$	-50			V				
Emitter-base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-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	$t_{on}$	<p style="font-size: small; margin-top: 5px;">-I<sub>B1</sub>=I<sub>B2</sub>=0.4A DUTY CYCLE ≤ 1%</p>				-	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.

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