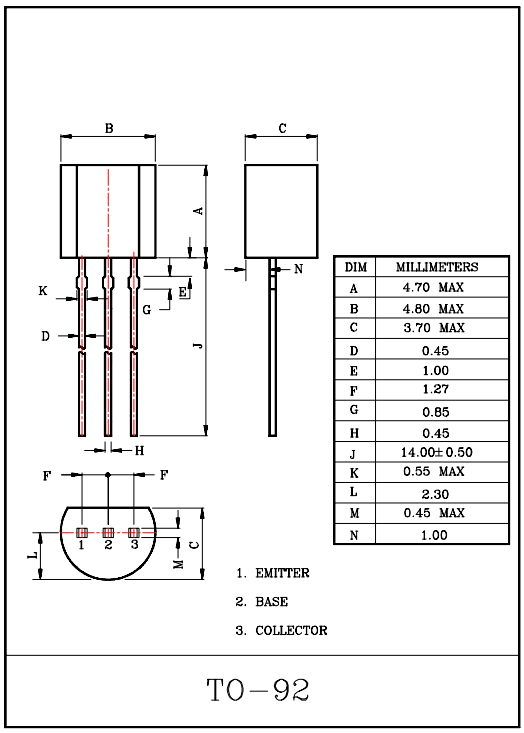
GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

FEATURES

- Low Leakage Current
  : I_{CEX}=-50nA(Max.) ; V_{CE}=-30V, V_{EB}=-0.5V.
- Low Saturation Voltage
  : $V_{CE(sat)}$=-0.4V(Max.) ; I_C=-150mA, I_B=-15mA.
- Complementary to the KTN2222/2222A.
- KTN2907/2907A Electrically Similar to 2N2907/2907A.



DIM	MILLIMETERS
A	4.70 MAX
B	4.80 MAX
C	3.70 MAX
D	0.45
E	1.00
F	1.27
G	0.85
H	0.45
J	14.00±0.50
K	0.55 MAX
L	2.30
M	0.45 MAX
N	1.00

TO-92

MAXIMUM RATINGS (Ta=25℃)

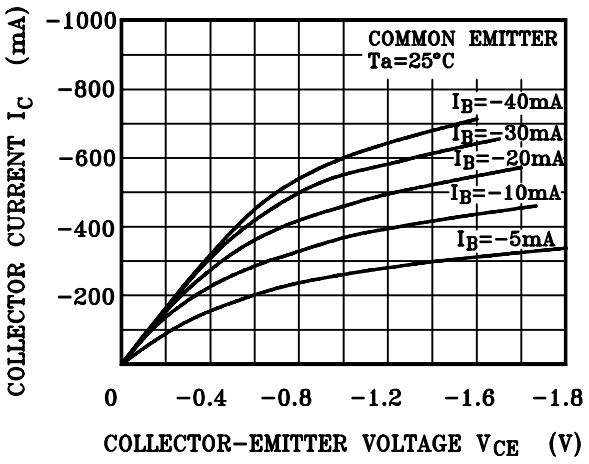
CHARACTERISTIC	SYMBOL	RATING		UNIT
		KTN2907	KTN2907A	
Collector-Base Voltage	V_{CBO}	-60		V
Collector-Emitter Voltage	V_{CEO}	-40	-60	V
Emitter-Base Voltage	V_{EBO}	-5		V
Collector Current	I_C	-600		mA
Collector Power Dissipation (Ta=25℃)	P_C	625		mW
Junction Temperature	T_j	150		℃
Storage Temperature Range	T_{stg}	-55~150		℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

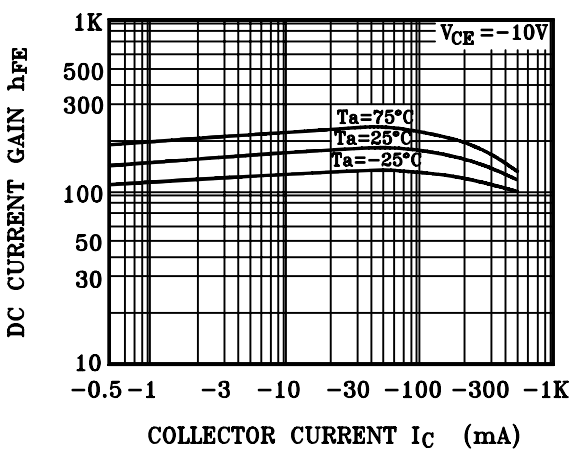
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CEX}	V_{CE}=-30V, V_{EB}=-0.5V	-	-	-50	nA
Collector Cut-off Current	KTN2907	I_{CBO}	V_{CB}=-50V, I_E=0	-	-	-20	nA
	KTN2907A			-	-	-10	
Collector-Base Breakdown Voltage *		$V_{(BR)CBO}$	I_C=-10μA, I_E=0	-60	-	-	V
Collector-Emitter Breakdown Voltage	KTN2907	$V_{(BR)CEO}$	I_C=-10mA, I_B=0	-40	-	-	V
	KTN2907A			-60	-	-	
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	I_E=-10μA, I_C=0	-5	-	-	V
DC Current Gain *	KTN2907	h_{FE}(1)	I_C=-0.1mA, V_{CE}=-10V	35	-	-	
	KTN2907A			75	-	-	
	KTN2907	h_{FE}(2)	I_C=-0.1mA, V_{CE}=-10V	50	-	-	
	KTN2907A			100	-	-	
	KTN2907	h_{FE}(3)	I_C=-10mA, V_{CE}=-10V	75	-	-	
	KTN2907A			100	-	-	
	KTN2907	h_{FE}(4) *	I_C=-150mA, V_{CE}=-10V	100	-	300	
	KTN2907A						
	KTN2907	h_{FE}(5) *	I_C=-500mA, V_{CE}=-10V	30	-	-	
	KTN2907A			50	-	-	
Collector-Emitter Saturation Voltage *		$V_{CE(sat)}$1	I_C=-150mA, I_B=-15mA	-	-	-0.4	V
		$V_{CE(sat)}$2	I_C=-500mA, I_B=-50mA	-	-	-1.6	
Base-Emitter Saturation Voltage *		$V_{BE(sat)}$1	I_C=-150mA, I_B=-15mA	-	-	-1.3	V
		$V_{BE(sat)}$2	I_C=-500mA, I_B=-50mA	-	-	-2.6	
Transition Frequency		f_T	V_{CE}=-20V, I_C=-50mA, f=100MHz	200	-	-	MHz
Collector Output Capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	-	8	pF
Input Capacitance		C_{ib}	V_{BE}=-2V, I_C=0, f=1MHz	-	-	30	pF
Switching Time	Turn-On Time	t_{on}	V_{CC}=-30V, I_C=-150mA, I_{B1}=-15mA	-	26	45	nS
	Delay Time	t_d		-	6.0	10	
	Rise Time	t_r		-	20	40	
	Turn-Off Time	t_{off}	V_{CC}=-6V, I_C=-150mA, I_{B1}=-I_{B2}=-15mA	-	70	100	
	Storage Time	t_{stg}		-	50	80	
	Fall Time	t_f		-	20	30	

Note : *Pulse Test : Pulse Width ≤300μS, Duty Cycle≤2.0%.

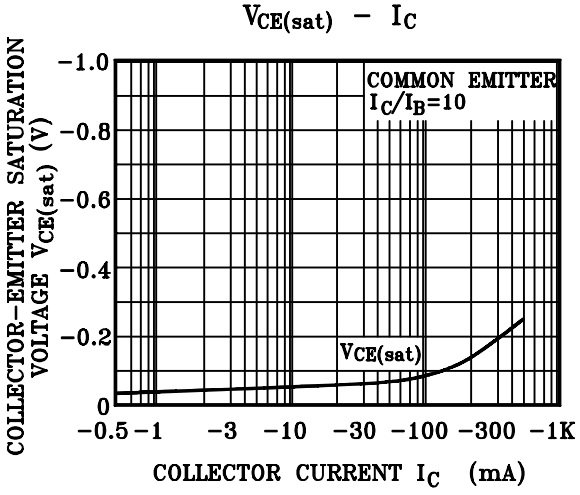
I_C – V_{CE}



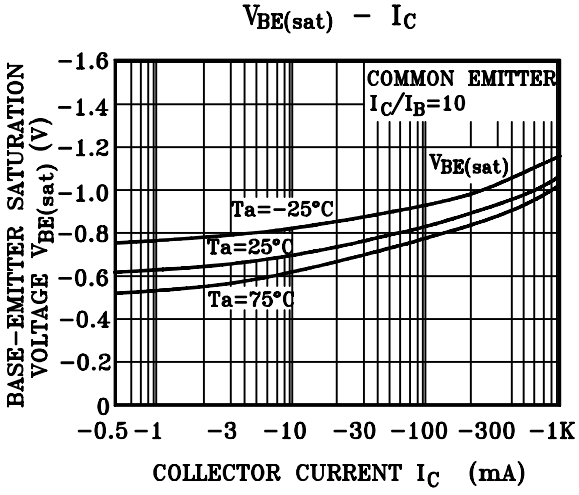
h_{FE} – I_C



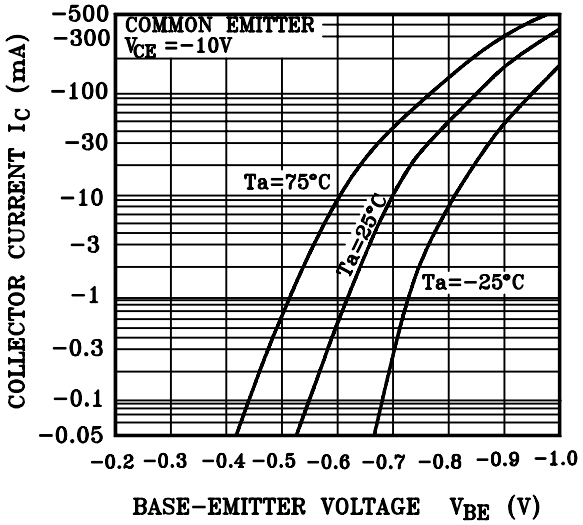
$V_{CE(sat)}$ – I_C



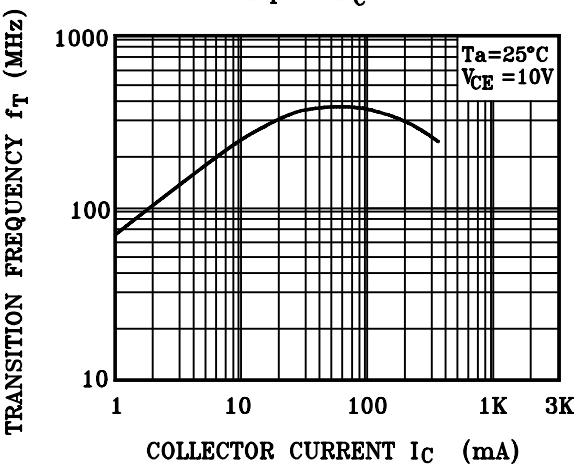
$V_{BE(sat)}$ – I_C

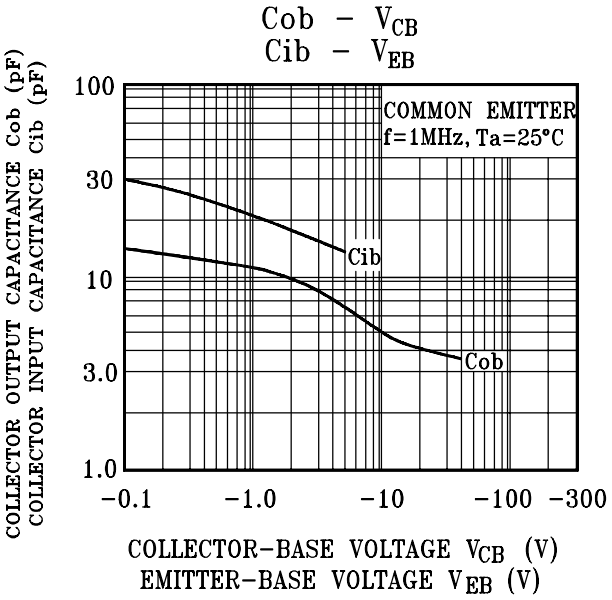


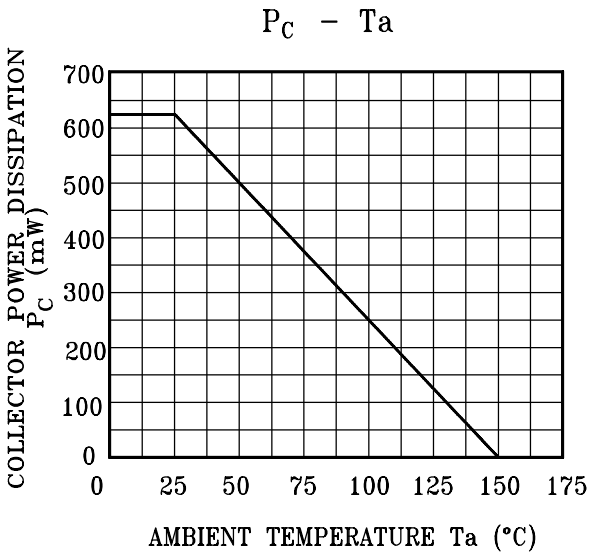
I_C – V_{BE}



f_T – I_C




Cob - V_{CB}
Cib - V_{EB}
COLLECTOR OUTPUT CAPACITANCE Cob (pF)
COLLECTOR INPUT CAPACITANCE Cib (pF)
100
30
10
3.0
1.0
COMMON EMITTER
f=1MHz, Ta=25°C
Cib
Cob
−0.1
−1.0
−10
−100
−300
COLLECTOR-BASE VOLTAGE V_{CB} (V)
EMITTER-BASE VOLTAGE V_{EB} (V)


P_C - Ta
COLLECTOR POWER DISSIPATION P_C (mW)
700
600
500
400
300
200
100
0
0
25
50
75
100
125
150
175
AMBIENT TEMPERATURE Ta (°C)