

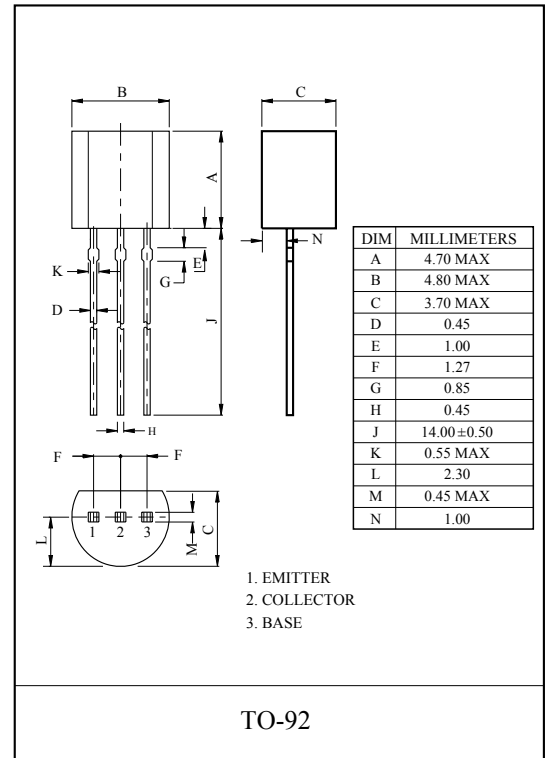
GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

### FEATURES

- Excellent  $h_{FE}$  Linearity  
 :  $h_{FE(2)}=100(\text{Typ.})$  at  $V_{CE}=6V, I_C=150mA$   
 :  $h_{FE(I_C=0.1mA)}/h_{FE(I_C=2mA)}=0.95(\text{Typ.})$ .
- Low Noise :  $NF=1dB(\text{Typ.})$  at  $f=1kHz$ .
- Complementary to KTA1266.

### MAXIMUM RATING ( $T_a=25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	50	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	150	mA
Base Current	$I_B$	50	mA
Collector Power Dissipation	$P_C$	625	mW
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55 ~ 150	$^\circ C$

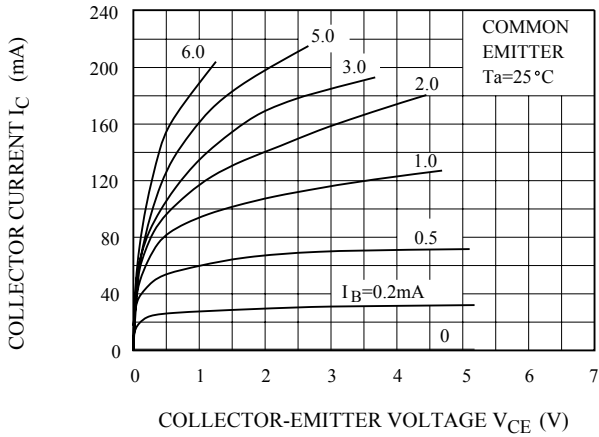


### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

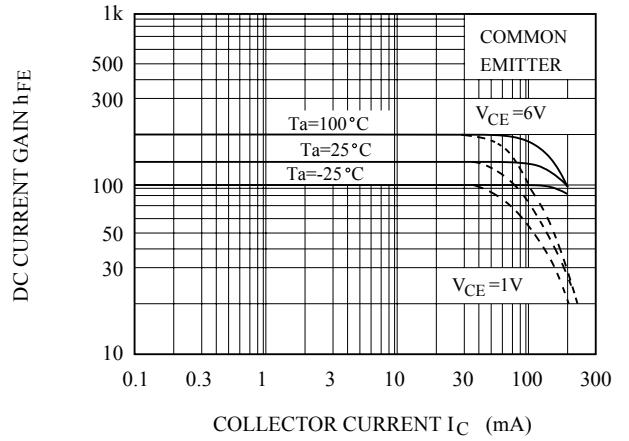
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=60V, I_E=0$	-	-	0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	0.1	$\mu A$
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=6V, I_C=2mA$	70	-	700	
	$h_{FE(2)}$	$V_{CE}=6V, I_C=150mA$	25	100	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$	-	0.1	0.25	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=10mA$	-	-	1.0	V
Transition Frequency	$f_T$	$V_{CE}=10V, I_C=1mA$	80	-	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	2.0	3.5	pF
Base Intrinsic Resistance	$r_{bb'}$	$V_{CB}=10V, I_E=1mA, f=30MHz$	-	50	-	$\Omega$
Noise Figure	NF	$V_{CE}=6V, I_C=0.1mA, R_g=10k\Omega, f=1kHz$	-	1.0	10	dB

Note :  $h_{FE(1)}$  Classification O:70 ~ 140, Y:120 ~ 240, GR:200 ~ 400, BL:300~700

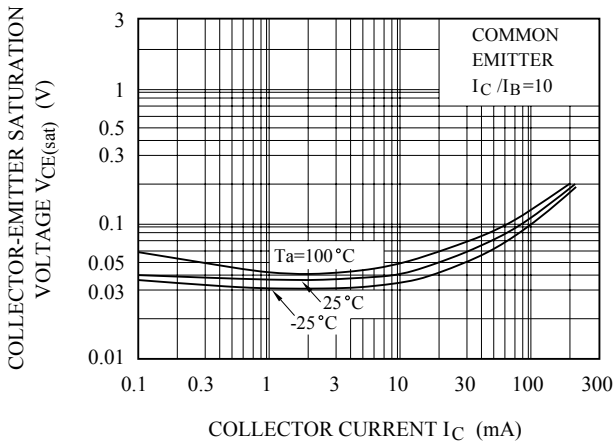
$I_C - V_{CE}$



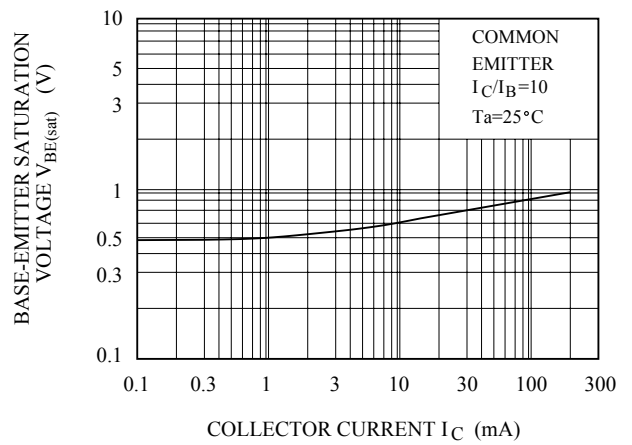
$h_{FE} - I_C$



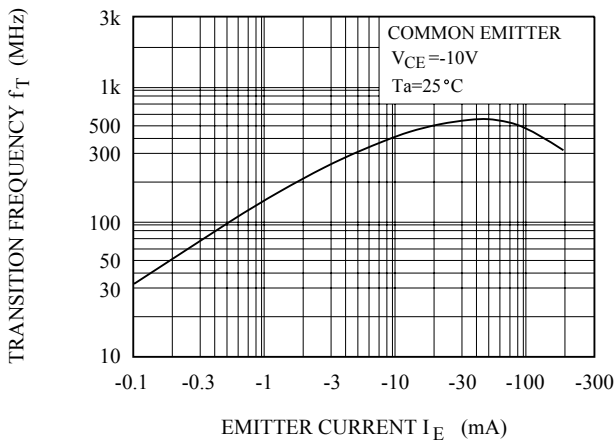
$V_{CE(sat)} - I_C$



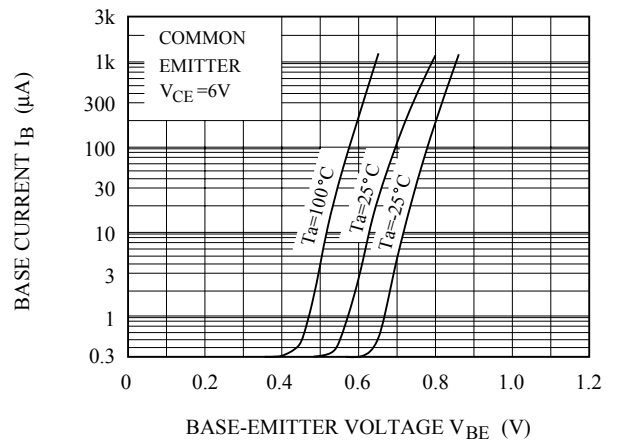
$V_{BE(sat)} - I_C$



$f_T - I_E$

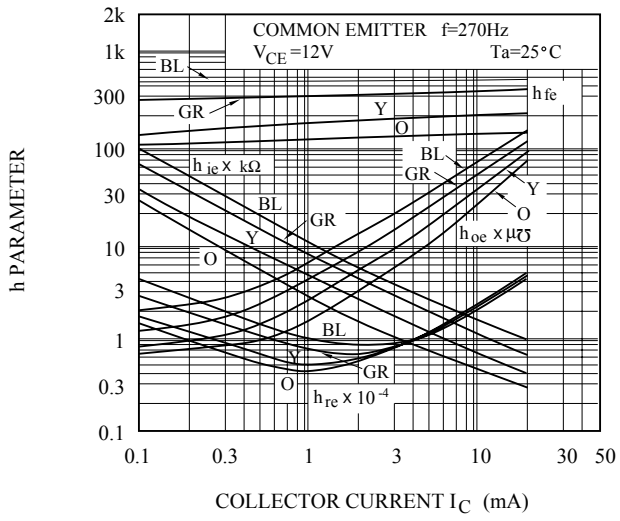


$I_B - V_{BE}$

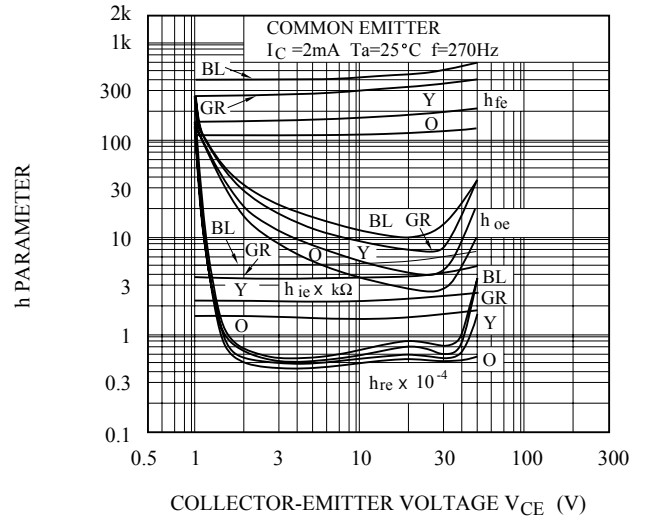


# KTC3198

h PARAMETER -  $I_C$



h PARAMETER -  $V_{CE}$



$P_c - T_a$

