

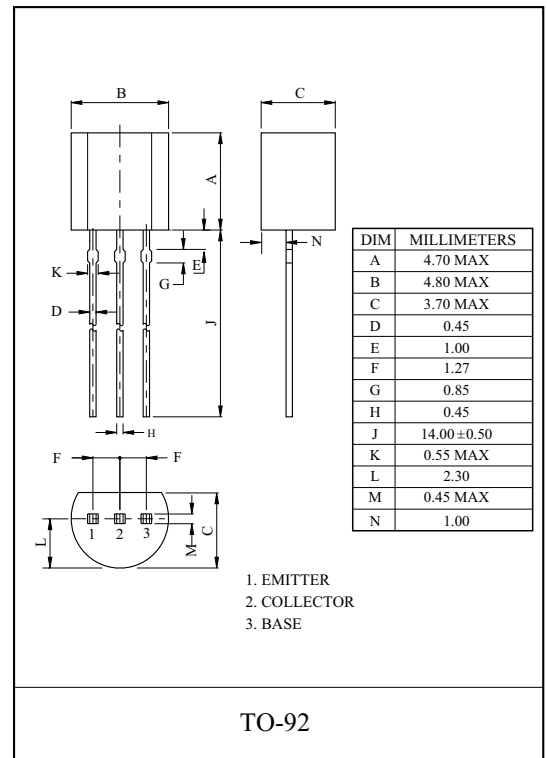
GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

## FEATURES

- Excellent  $h_{FE}$  Linearity  
:  $h_{FE}(2)=80(\text{Typ.})$  at  $V_{CE}=-6V$ ,  $I_C=-150\text{mA}$   
:  $h_{FE}(I_C=0.1\text{mA})/h_{FE}(I_C=2\text{mA})=0.95(\text{Typ.})$ .
- Low Noise :  $NF=1\text{dB}(\text{Typ.})$ . at  $f=1\text{kHz}$ .
- Complementary to KTC3198.

## MAXIMUM RATING (Ta=25 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-50	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	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C

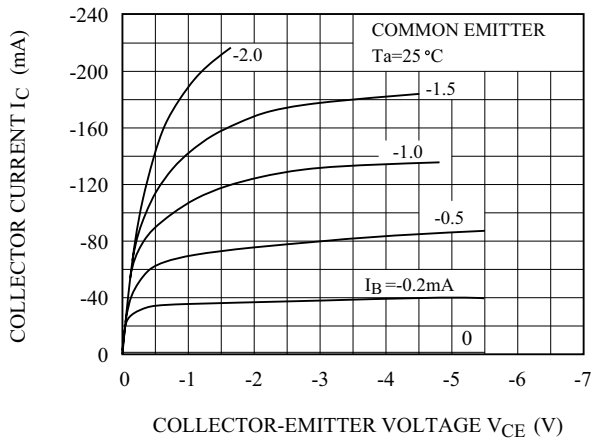


## ELECTRICAL CHARACTERISTICS (Ta=25 °C)

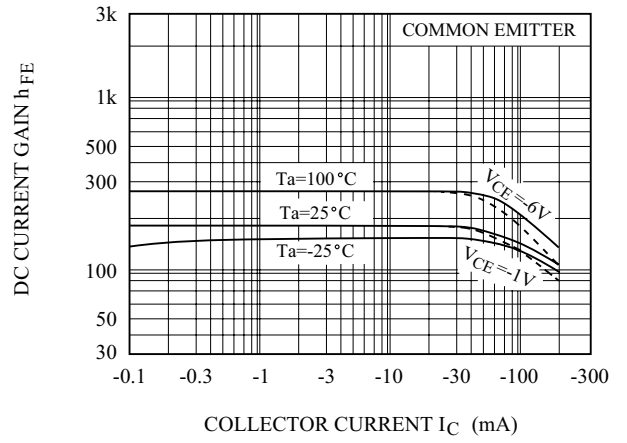
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=-50V$ , $I_E=0$	-	-	-0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=-5V$ , $I_C=0$	-	-	-0.1	$\mu A$
DC Current Gain	$h_{FE}(1)$ (Note)	$V_{CE}=-6V$ , $I_C=-2\text{mA}$	70	-	400	
	$h_{FE}(2)$	$V_{CE}=-6V$ , $I_C=-150\text{mA}$	25	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-100\text{mA}$ , $I_B=-10\text{mA}$	-	-0.1	-0.3	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-100\text{mA}$ , $I_B=-10\text{mA}$	-	-	-1.1	V
Transition Frequency	$f_T$	$V_{CE}=-10V$ , $I_C=-1\text{mA}$	80	-	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=-10V$ , $I_E=0$ , $f=1\text{MHz}$	-	4.0	7.0	pF
Base Intrinsic Resistance	$r_{bb'}$	$V_{CB}=-10V$ , $I_E=1\text{mA}$ , $f=30\text{MHz}$	-	30	-	$\Omega$
Noise Figure	NF	$V_{CE}=-6V$ , $I_C=-0.1\text{mA}$ , $R_g=10k\Omega$ , $f=1\text{kHz}$	-	1.0	10	dB

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

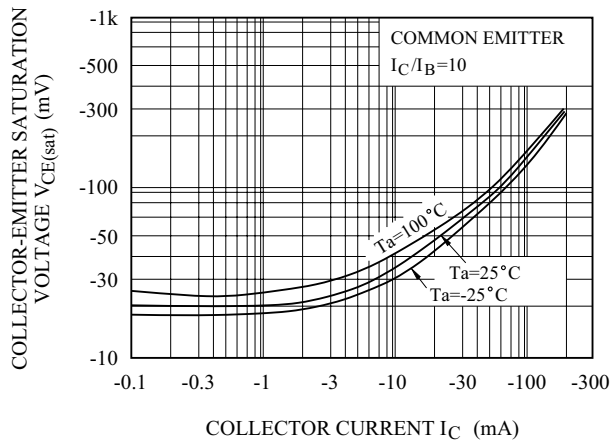
$I_C - V_{CE}$



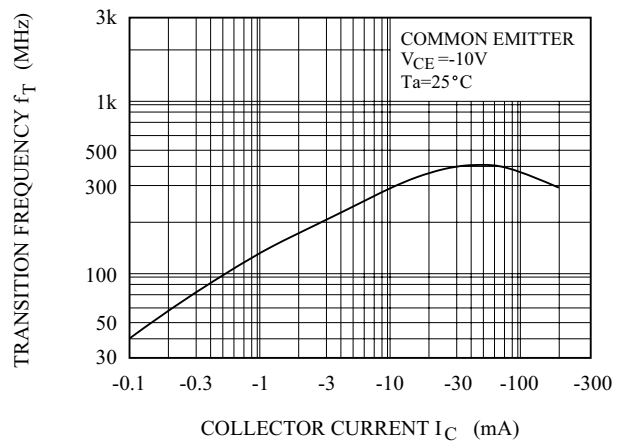
$h_{FE} - I_C$



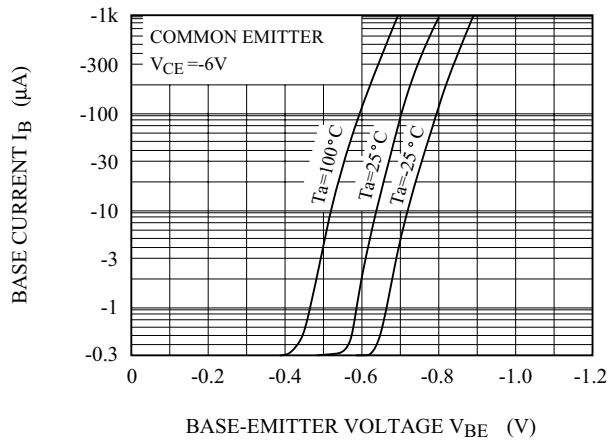
$V_{CE(sat)} - I_C$



$f_T - I_C$



$I_B - V_{BE}$



$P_C - T_a$

