

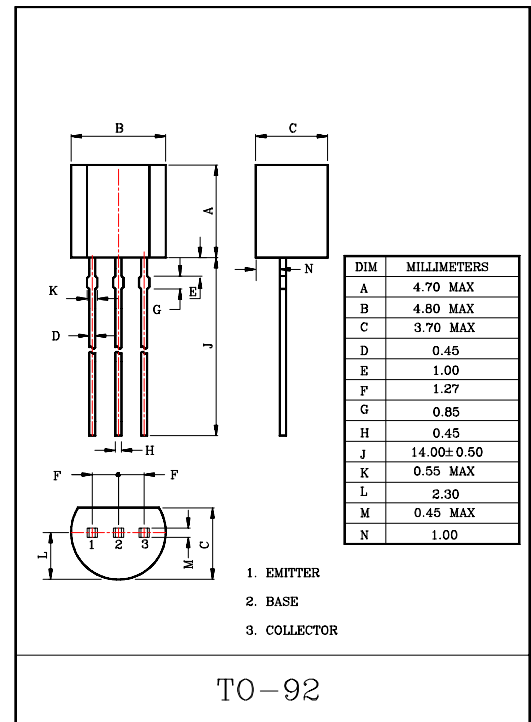
GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

FEATURES

- Low Leakage Current
: $I_{CEX} = -50\text{nA}(\text{Max.})$, @ $V_{CE} = -30\text{V}$, $V_{EB} = -3\text{V}$.
- Low Saturation Voltage
: $V_{CE(\text{sat})} = -0.4\text{V}(\text{Max.})$ @ $I_C = -50\text{mA}$, $I_B = -5\text{mA}$.
- Complementary to KN3903.

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-200	mA
Base Current	I_B	-50	mA
Collector Power Dissipation	P_C	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ\text{C}$



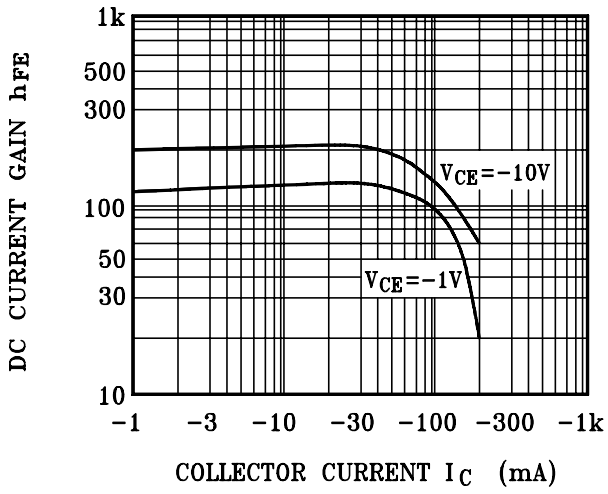
KN3905

ELECTRICAL CHARACTERISTICS (Ta=25°C)

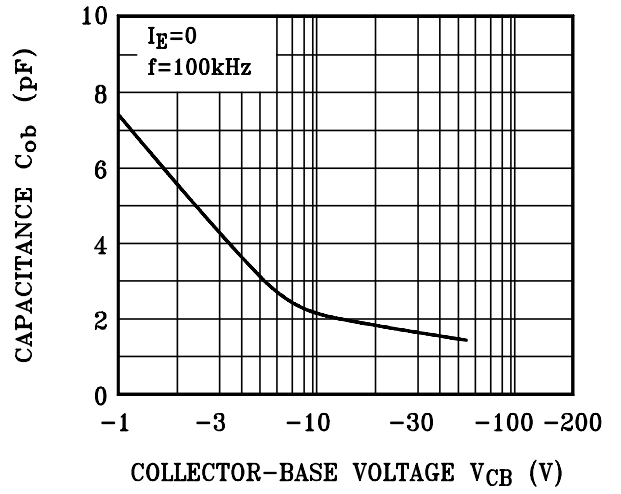
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CEX}	$V_{CE}=-30V, V_{EB}=-3V$	-	-	-50	nA
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$	-40	-	-	V
Collector-Emitter Breakdown Voltage *	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-40	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-5	-	-	V
DC Current Gain *	$h_{FE}(1)$	$V_{CE}=-1V, I_C=-0.1mA$	30	-	-	
	$h_{FE}(2)$	$V_{CE}=-1V, I_C=-1mA$	40	-	-	
	$h_{FE}(3)$	$V_{CE}=-1V, I_C=-10mA$	50	-	150	
	$h_{FE}(4)$	$V_{CE}=-1V, I_C=-50mA$	30	-	-	
	$h_{FE}(5)$	$V_{CE}=-1V, I_C=-100mA$	15	-	-	
Collector-Emitter Saturation Voltage *	$V_{CE(sat)1}$	$I_C=-10mA, I_B=-1mA$	-	-	-0.25	V
	$V_{CE(sat)2}$	$I_C=-50mA, I_B=-5mA$	-	-	-0.4	
Base-Emitter Saturation Voltage *	$V_{BE(sat)1}$	$I_C=-10mA, I_B=-1mA$	-0.65	-	-0.85	V
	$V_{BE(sat)2}$	$I_C=-50mA, I_B=-5mA$	-	-	-0.95	
Transition Frequency	f_T	$V_{CE}=-20V, I_C=-10mA, f=100MHz$	-	200	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=-5V, I_E=0, f=1MHz$	-	-	4.5	pF

Note : *Pulse Test : Pulse Width $\leq 300\mu S$, Duty Cycle $\leq 2.0\%$

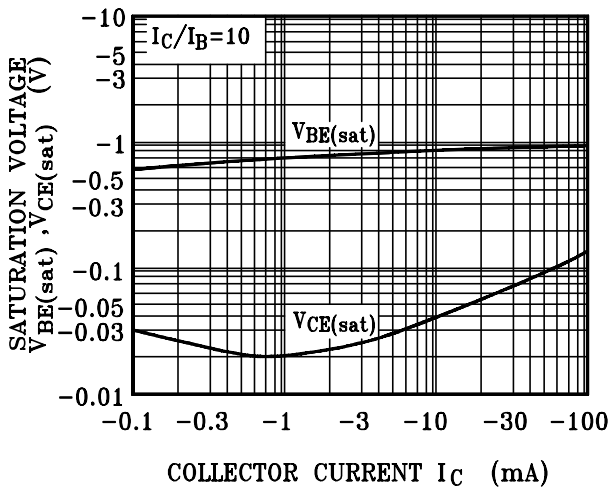
$h_{FE} - I_C$



$C_{ob} - V_{CB}$



$V_{BE(sat)}, V_{CE(sat)} - I_C$



$P_C - T_a$

