

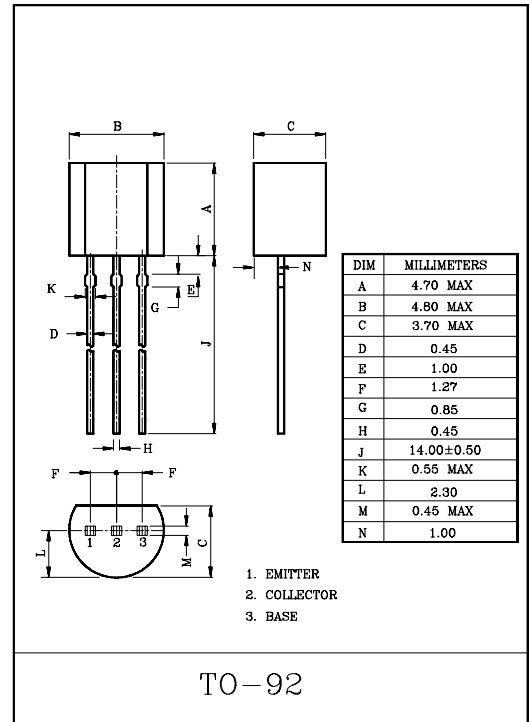
GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION.

FEATURES

- Excellent h_{FE} Linearity
 : $h_{FE(2)}=100(\text{Typ.})$ 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 : $NF=2\text{dB}(\text{Typ.})$ at $f=1\text{kHz}$.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	40	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	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V, I_E=0$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	0.1	μA
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE}=6V, I_C=2\text{mA}$	70	-	700	
	$h_{FE(2)}$	$V_{CE}=6V, I_C=150\text{mA}$	25	100	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$	-	0.08	0.2	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$	-	-	1.0	V
Transition Frequency	f_T	$V_{CE}=10V, I_E=-10\text{mA}$	-	250	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1\text{MHz}$	-	2.0	3.0	pF
Base Intrinsic Resistance	$r_{bb'}$	$V_{CB}=10V, I_C=1\text{mA}, f=30\text{MHz}$	-	50	-	Ω
Noise Figure	NF	$V_{CE}=6V, I_C=0.1\text{mA}, R_g=10k\Omega, f=1\text{kHz}$	-	2.0	10	dB

Note) h_{FE} Classification O : 70~140, Y : 120~240, GR : 200~400, BL : 350~700