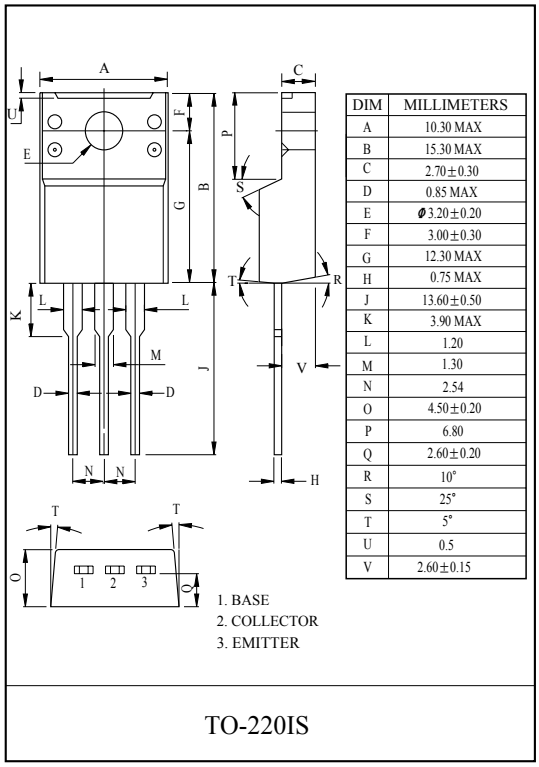
SWITCHING APPLICATION.
INTERFACE CIRCUIT AND DRIVER CIRCUIT APPLICATION.

FEATURES

· High h_{FE} : h_{FE}=500 ~ 1500 (I_C=0.5A).

· Low Collector Saturation :$V_{CE(sat)}$=0.35V(Max.) (I_C=1A).



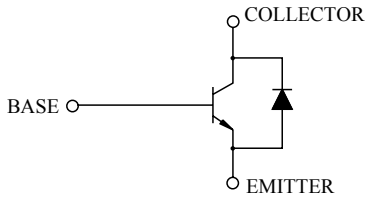
DIM	MILLIMETERS
A	10.30 MAX
B	15.30 MAX
C	2.70±0.30
D	0.85 MAX
E	Ø3.20±0.20
F	3.00±0.30
G	12.30 MAX
H	0.75 MAX
J	13.60±0.50
K	3.90 MAX
L	1.20
M	1.30
N	2.54
O	4.50±0.20
P	6.80
Q	2.60±0.20
R	10°
S	25°
T	5°
U	0.5
V	2.60±0.15

TO-220IS

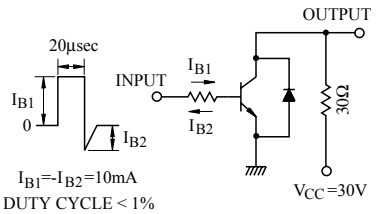
MAXIMUM RATING (Ta=25℃)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	100	V
Collector-Emitter Voltage		V_{CEO}	80	V
Emitter-Base Voltage		V_{EBO}	7	V
Collector Current	DC	I_C	3	A
	Pulse	I_{CP}	5	
Base Current		I_B	1	A
Collector Power Dissipation	Ta=25℃	P_C	2	W
	Tc=25℃		25	
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55 ~ 150	℃

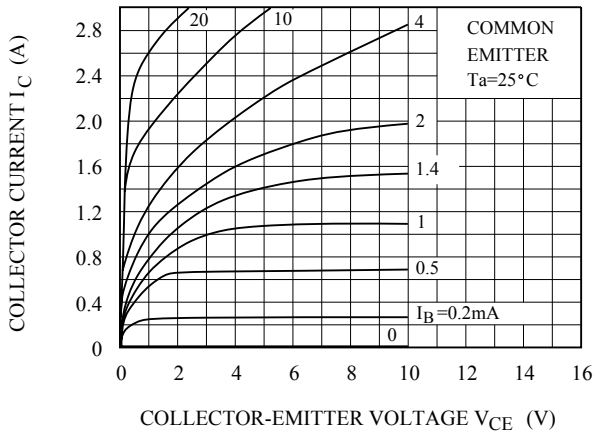
EQUIVALENT CIRCUIT



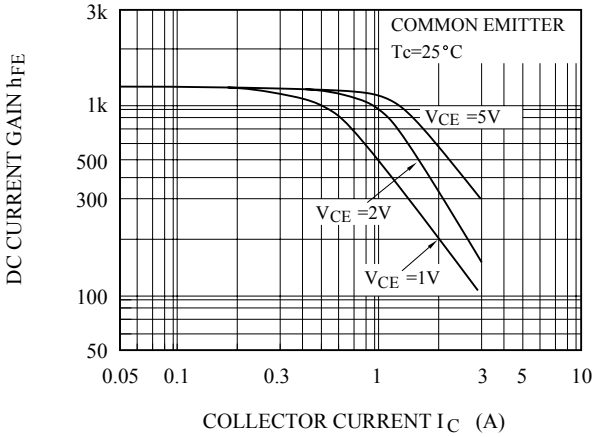
ELECTRICAL CHARACTERISTICS (Ta=25℃)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I_{CBO}	V_{CB}=80V, I_E=0	-	-	10	μA
Emitter Cut-off Current		I_{EBO}	V_{EB}=7V, I_C=0	-	-	10	μA
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	I_C=50mA, I_B=0	80	-	-	V
DC Current Gain		h_{FE}(1)	V_{CE}=1V, I_C=0.5A	500	-	1500	
		h_{FE}(2)	V_{CE}=1V, I_C=1A	150	-	-	
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	I_C=1A, I_B=0.01A	-	-	0.35	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	I_C=1A, I_B=0.01A	-	-	1.2	V
Collector-Emitter Forward Voltage		V_{ECF}	I_E=3A, I_B=0	-	-	2.5	V
Transition Frequency		f_T	V_{CE}=5V, I_C=1A	-	140	-	MHz
Collector Output Capacitance		C_{ob}	V_{CE}=10V, I_E=0, f=1MHz	-	30	-	pF
Switching Time	Turn-on Time	t_{on}		-	0.5	-	μS
	Storage Time	T_{stg}		-	5.0	-	
	Fall Time	t_f		-	0.7	-	

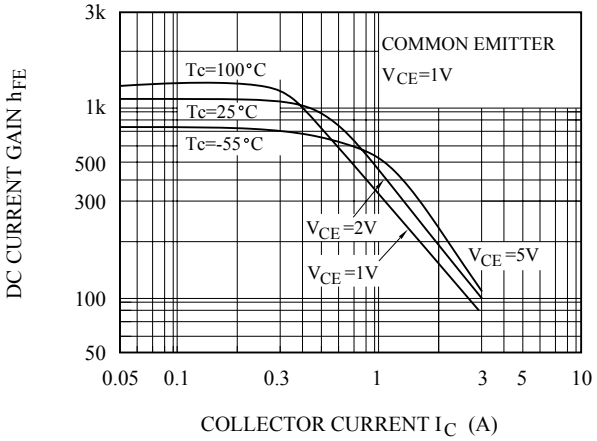
I_C - V_{CE}



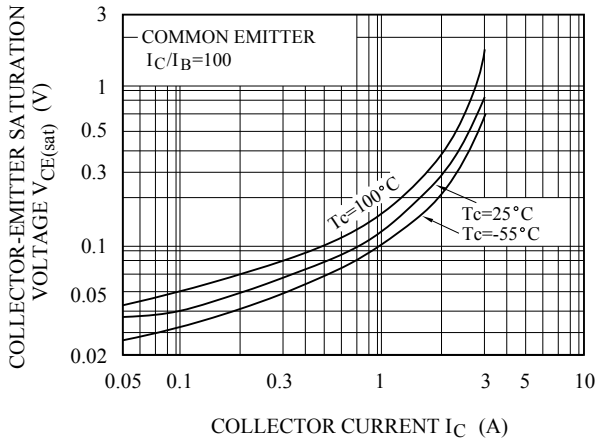
h_{FE} - I_C



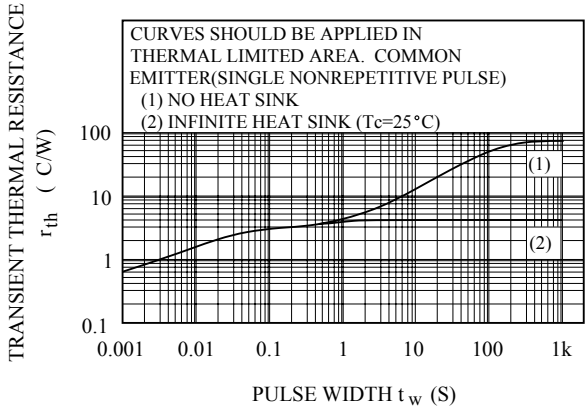
h_{FE} - I_C



$V_{CE(sat)}$ - I_C



r_{th} - t_w



SAFE OPERATING AREA