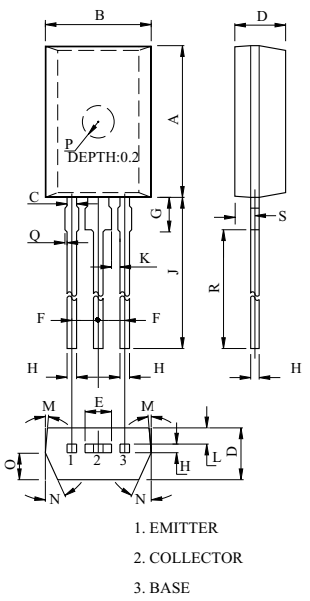
BLACK AND WHITE TV VIDEO OUTPUT APLICATION.
HIGH VOLTAGE SWITCHING APPLICATION.

FEATURES

· High Breakdown Voltage : V_{CEO}=150V(Min.).
· Low Output Capacitance : C_{ob}=5.0pF(Max.).
· High Transition Frequency : f_T=120MHz(Typ.).



DIM	MILLIMETERS
A	7.20 MAX
B	5.20 MAX
C	0.60 MAX
D	2.50 MAX
E	1.15 MAX
F	1.27
G	1.70 MAX
H	0.55 MAX
J	14.00±0.50
K	0.35 MIN
L	0.75±0.10
M	4°
N	25°
O	1.25
P	Φ1.50
Q	0.10 MAX
R	12.50±0.50
S	1.00

TO-92L

MAXIMUM RATING (Ta=25℃)

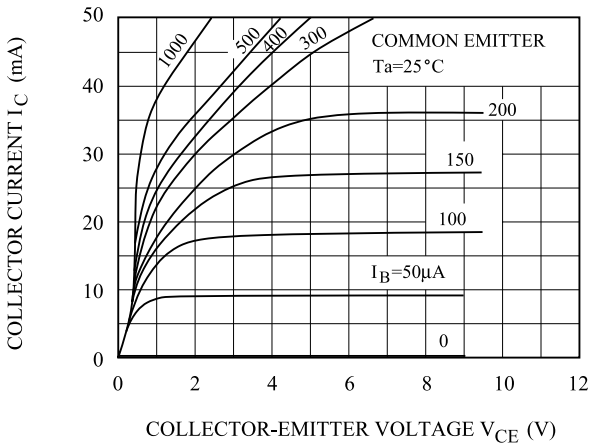
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	200	V
Collector-Emitter Voltage	V_{CEO}	150	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	50	mA
Emitter Current	I_E	-50	mA
Base Current	I_B	5	mA
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-55～150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

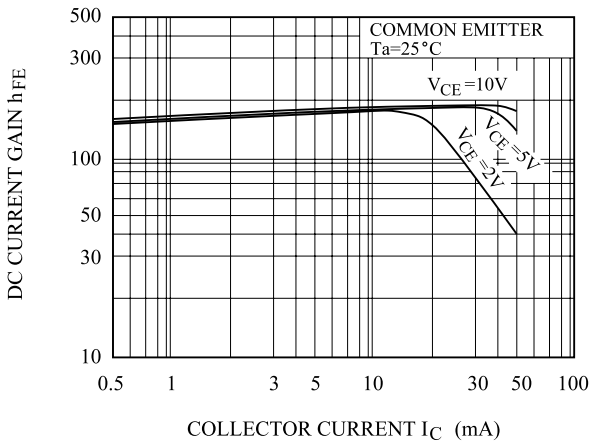
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=200V, I_E=0	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	0.1	μA
DC Current Gain	h_{FE} (Note)	V_{CE}=5V, I_C=10mA	70	-	240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=10mA, I_B=1mA	-	-	0.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=10mA, I_B=1mA	-	-	1.0	V
Transition Frequency	f_T	V_{CE}=30V, I_C=10mA	-	120	-	MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	3.5	5.0	pF

Note : h_{FE} Classification 0:70～140, Y:120～240

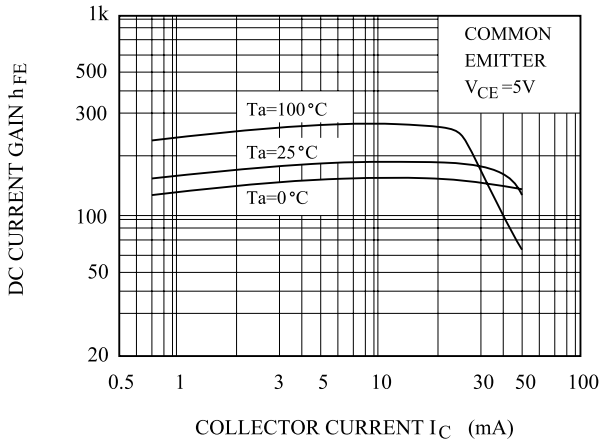
I_C - V_{CE}



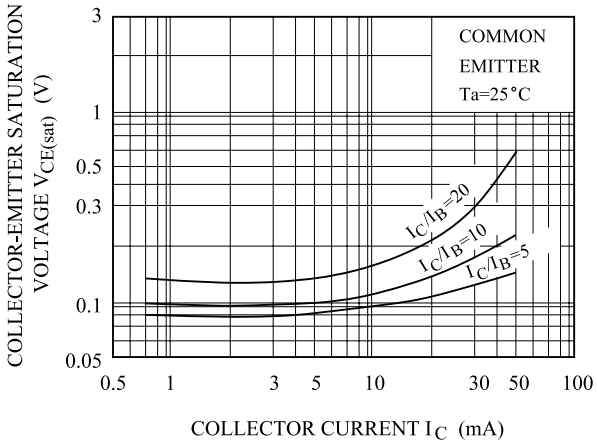
h_{FE} - I_C



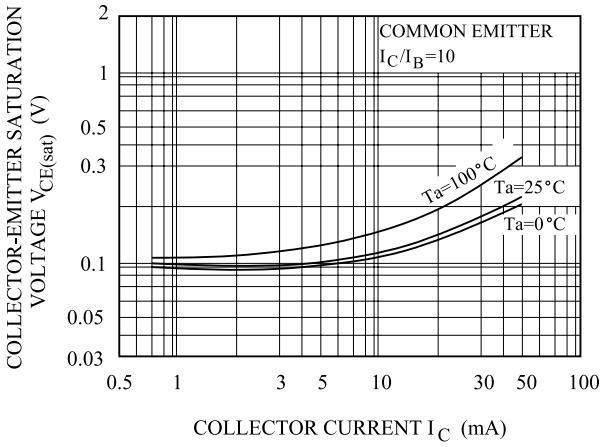
h_{FE} - I_C



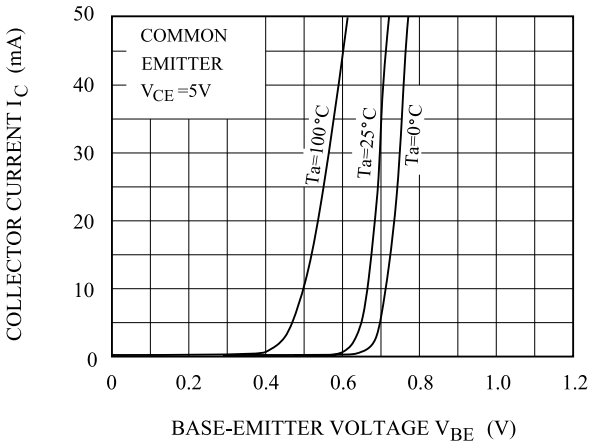
$V_{CE(sat)}$ - I_C

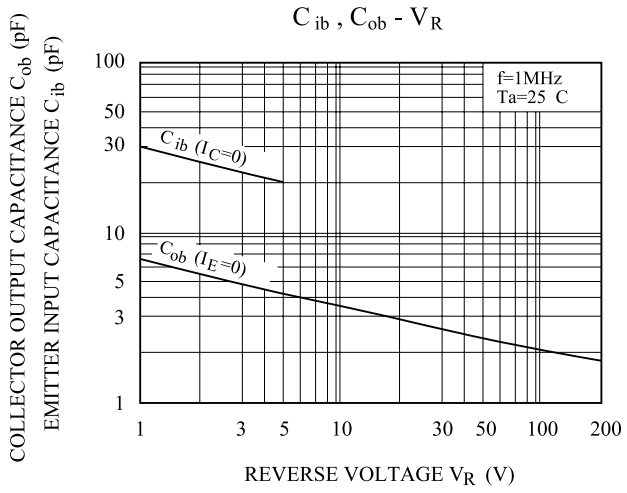


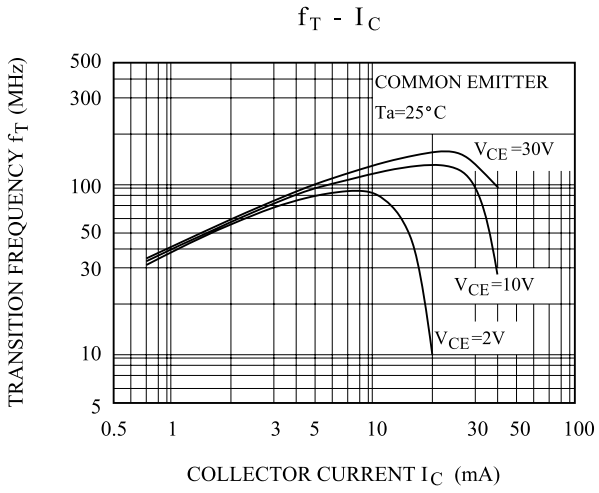
$V_{CE(sat)}$ - I_C

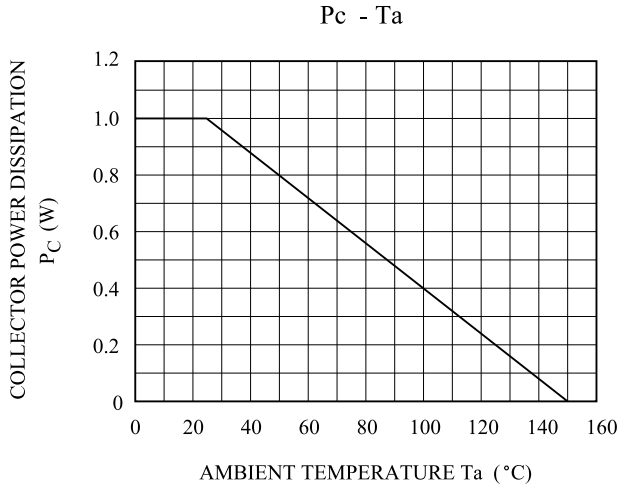


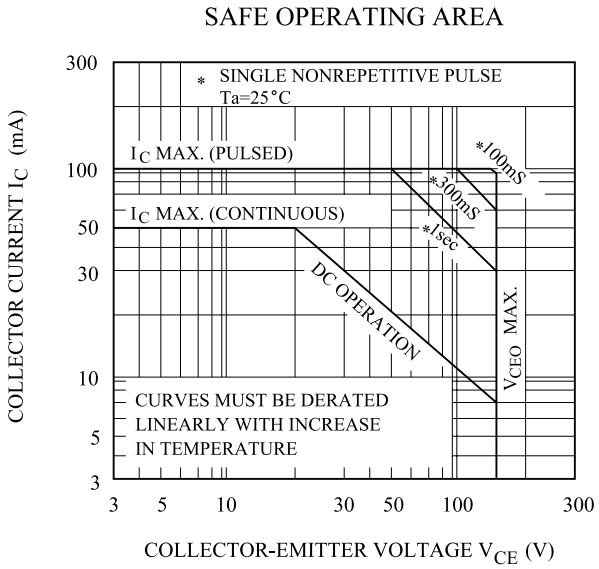
I_C - V_{BE}




C ib , Cob - VR
COLLECTOR OUTPUT CAPACITANCE Cob (pF)
EMITTER INPUT CAPACITANCE Cib (pF)
f=1MHz
Ta=25 C
Cib (IC=0)
Cob (IE=0)
100
50
30
10
5
3
1
1
3
5
10
30
50
100
200
REVERSE VOLTAGE VR (V)


fT - IC
TRANSITION FREQUENCY fT (MHz)
COMMON EMITTER
Ta=25°C
VCE =30V
VCE=10V
VCE=2V
500
300
100
50
30
10
5
0.5
1
3
5
10
30
50
100
COLLECTOR CURRENT IC (mA)


Pc - Ta
COLLECTOR POWER DISSIPATION
PC (W)
1.2
1.0
0.8
0.6
0.4
0.2
0
0
20
40
60
80
100
120
140
160
AMBIENT TEMPERATURE Ta (°C)


SAFE OPERATING AREA
* SINGLE NONREPETITIVE PULSE
Ta=25°C
IC MAX. (PULSED)
IC MAX. (CONTINUOUS)
*100mS
*300mS
*1sec
DC OPERATION
VCEO MAX.
CURVES MUST BE DERATED
LINEARLY WITH INCREASE
IN TEMPERATURE
COLLECTOR CURRENT IC (mA)
300
100
50
30
10
5
3
3
5
10
30
50
100
300
COLLECTOR-EMITTER VOLTAGE VCE (V)