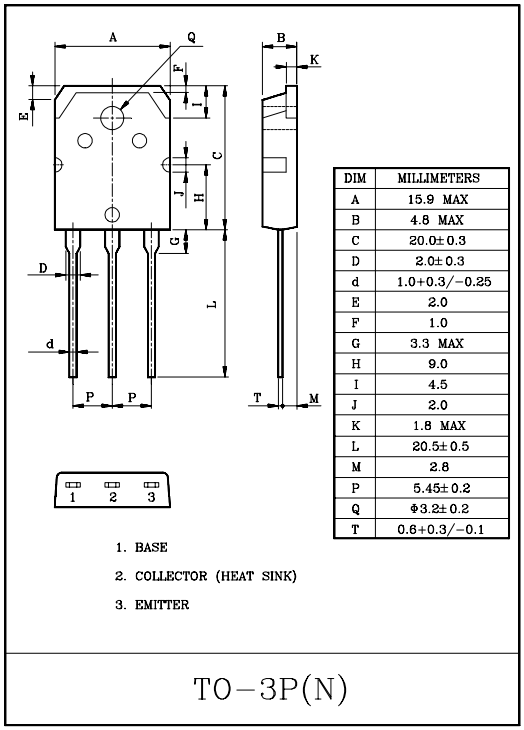
KTD1047

TRIPLE DIFFUSED NPN TRANSISTOR

HIGH POWER AMPLIFIER APPLICATION.

FEATURES

- Complementary to KTB817.
- Recommended for 60W Audio Frequency Amplifier Output Stage.



DIM	MILLIMETERS
A	15.9 MAX
B	4.8 MAX
C	20.0±0.3
D	2.0±0.3
d	1.0+0.3/−0.25
E	2.0
F	1.0
G	3.3 MAX
H	9.0
I	4.5
J	2.0
K	1.8 MAX
L	20.5±0.5
M	2.8
P	5.45±0.2
Q	Φ3.2±0.2
T	0.6+0.3/−0.1

TO−3P(N)

MAXIMUM RATINGS (Ta=25℃)

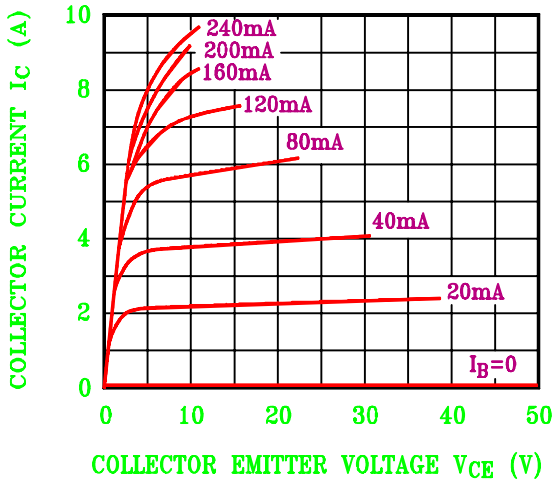
CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	160	V
Collector-Emitter Voltage		V_{CEO}	140	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	12	A
	Pulse		15	
Collector Power Dissipation (Tc=25℃)		P_C	100	W
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	-55~150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃)

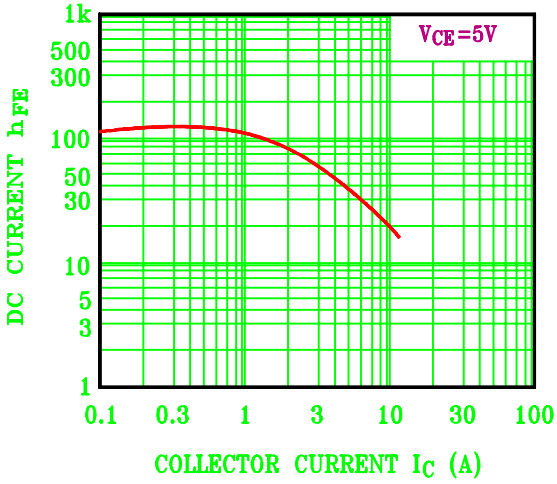
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	V_{CB}=80V, I_E=0	-	-	0.1	mA
Emitter Cut-off Current	I_{EBO}	V_{EB}=4V, I_C=0	-	-	0.1	mA
DC Current Gain	h_{FE} 1(Note)	V_{CE}=5V, I_C=1A	60	-	200	
	h_{FE} 2	V_{CE}=5V, I_C=6A	20	-		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=5A, I_B=0.5A	-	-	2.5	V
Base-Emitter On Voltage	$V_{BE(ON)}$	V_{CE}=5V, I_C=1A	-	-	1.5	V
Transition Frequency	f_T	V_{CE}=5V, I_C=1A	-	15	-	MHz
Output Capacitance	C_{ob}	V_{CB}=10V, f=1MHz	-	210	-	pF
Turn On Time	t_{on}	V_{CC}=20V I_C=1A=10·I_{B1}=-10·I_{B2} R_L=20Ω	-	0.26	-	μS
Fall Time	t_f		-	0.68	-	
Storage Time	t_{stg}		-	6.88	-	

Note : h_{FE} Classification O:60~120 , Y:100~200

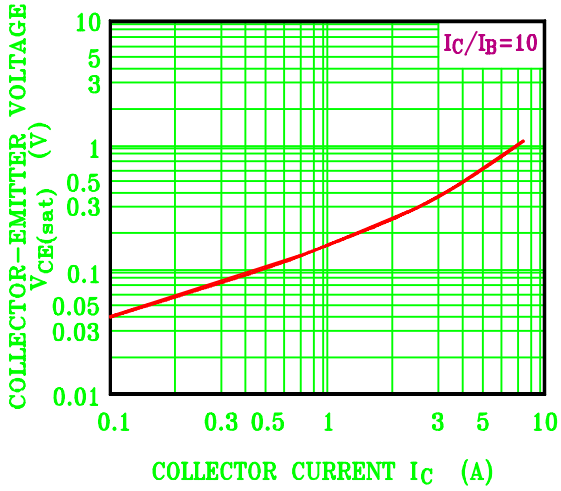
I_C – V_{CE}



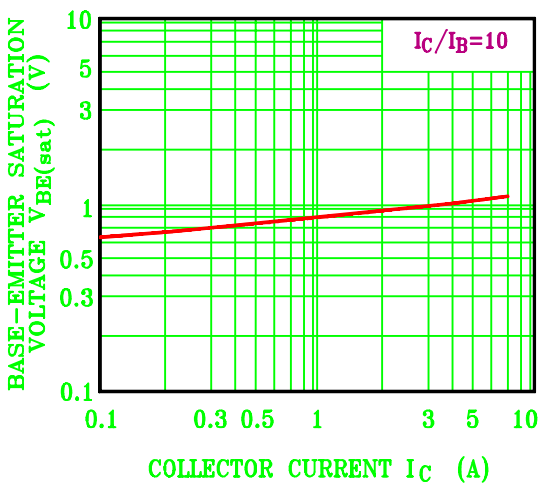
h_{FE} – I_C



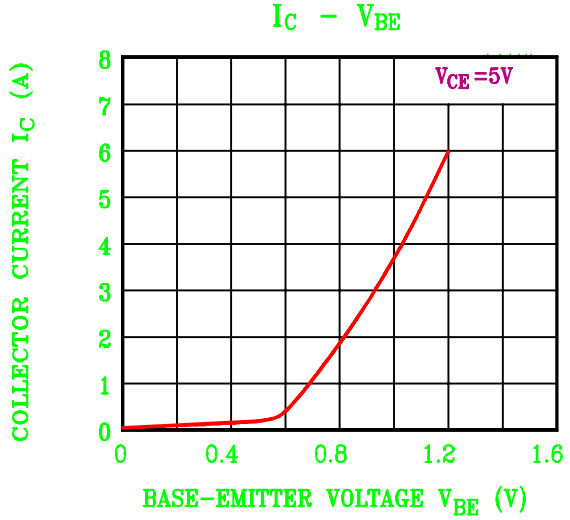
$V_{CE(sat)}$ – I_C



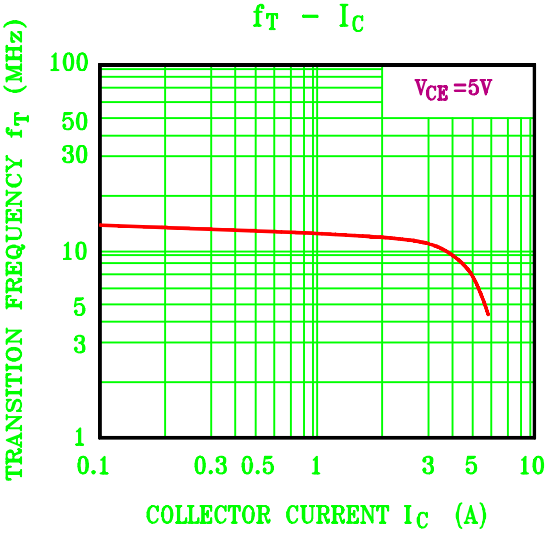
$V_{BE(sat)}$ – I_C

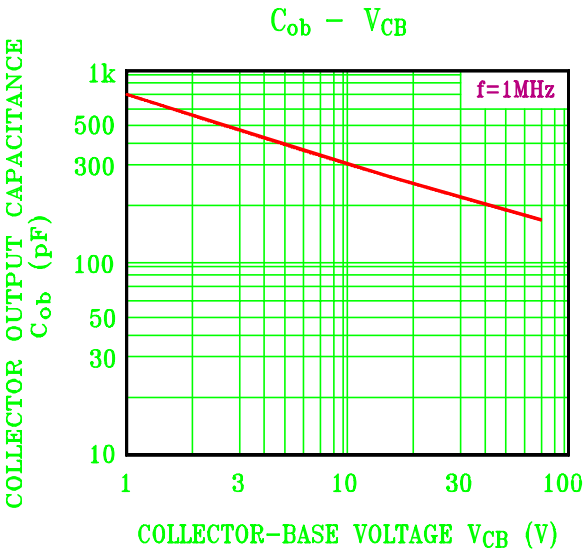


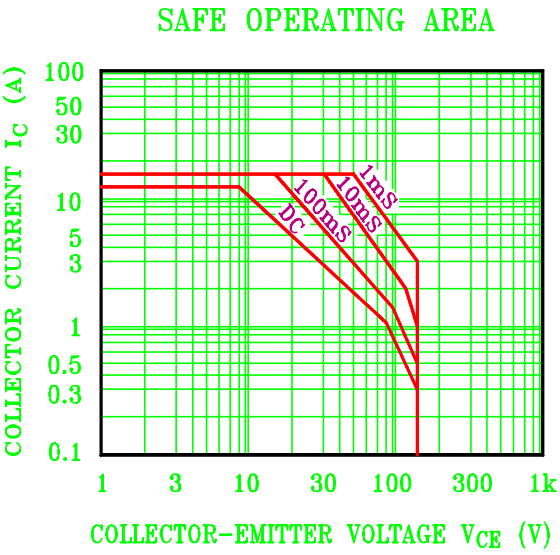
I_C – V_{BE}



f_T – I_C




C_{ob} – V_{CB}
COLLECTOR OUTPUT CAPACITANCE C_{ob} (pF)
1k
500
300
100
50
30
10
f=1MHz
1
3
10
30
100
COLLECTOR-BASE VOLTAGE V_{CB} (V)


SAFE OPERATING AREA
COLLECTOR CURRENT I_C (A)
100
50
30
10
5
3
1
0.5
0.3
0.1
1mS
10mS
100mS
DC
1
3
10
30
100
300
1k
COLLECTOR-EMITTER VOLTAGE V_{CE} (V)