JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

2SC2717 TRANSISTOR (**NPN**)

TO-92

1. BASE
2. EMITTER
3. COLLECTOR

1 2 3

FEATURES

- **. High Gain: G_{pe} =33 dB (Typ.) (f =45MH_Z)**
- **. Good Linearity of h_{FE}.**

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

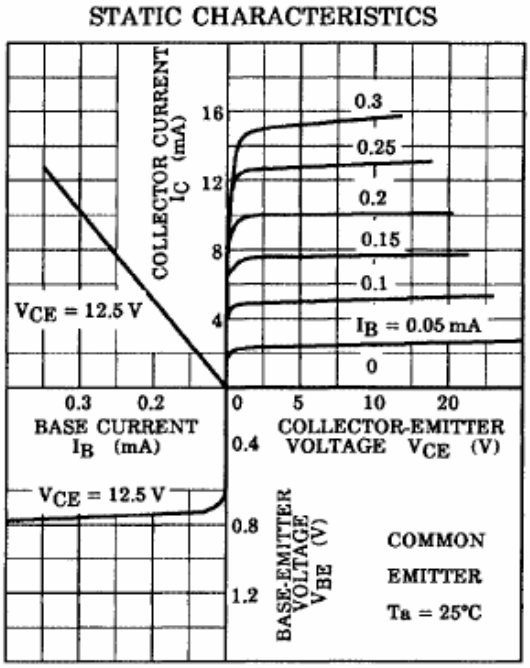
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	4	V
I_C	Collector Current -Continuous	50	mA
P_C	Collector Power Dissipation	300	mW
T_j	Junction Temperature	125	℃
T_{stg}	Storage Temperature	-55-125	℃

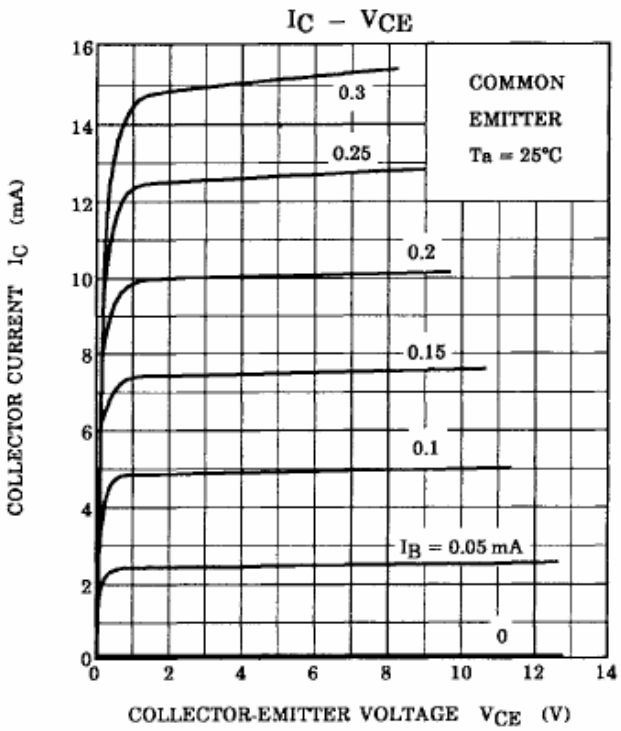
ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

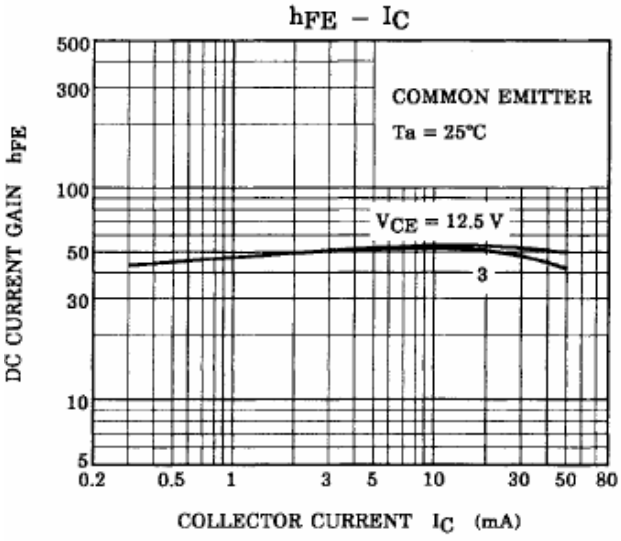
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA,I_B=0	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	4			V
Collector cut-off current	I_{CBO}	V_{CB}=30V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=3V,I_C=0			0.1	μA
DC current gain	h_{FE}	V_{CE}=12.5V,I_C=12.5mA	40		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=15mA,I_B=1.5mA			0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=15mA,I_B=1.5mA			1.5	V
Transition frequency	f_T	V_{CE}=12.5V,I_C=12.5mA	300			MHz
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=30MHz	0.8		2.0	pF
Collector-base time constant	$C_C{}^{.rbb'}$	V_{CB}=10V,I_E=-1mA,f=30MHz			25	ps
Power gain (fig.)	Gpe	V_{CC}=12.5V,I_E=-12.5mA,f=45MHz	28		36	dB

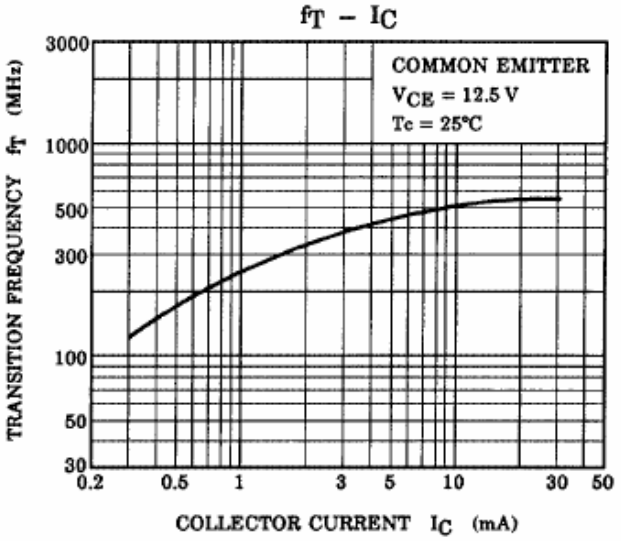
Typical Characteristics

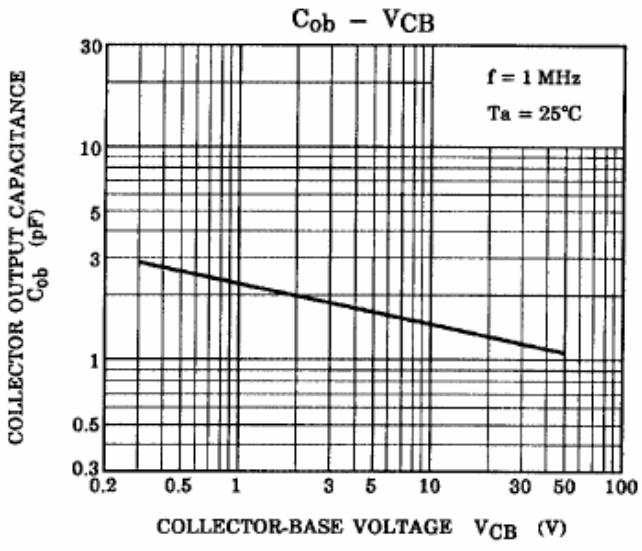
2SC2717

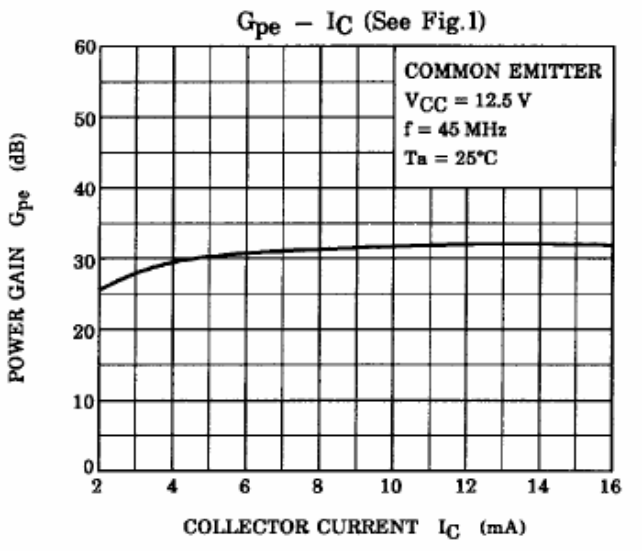


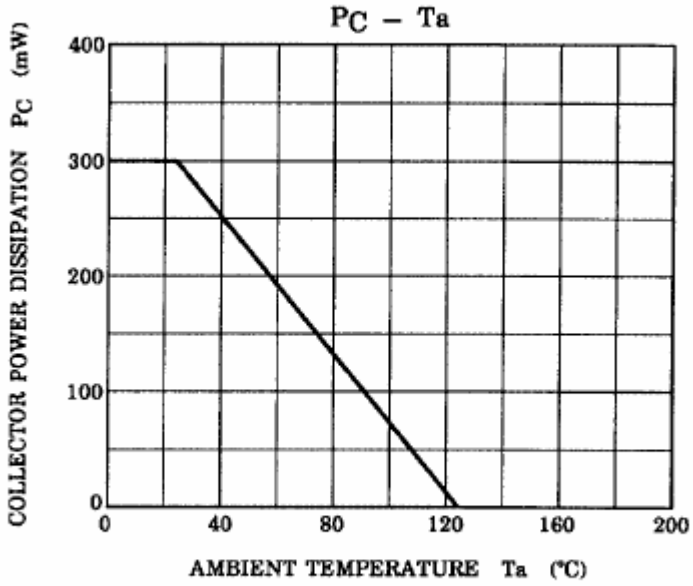







C_{ob} – V_{CB}
f = 1 MHz
Ta = 25°C
COLLECTOR OUTPUT CAPACITANCE C_{ob} (pF)
30
10
5
3
1
0.5
0.3
0.2
0.5
1
3
5
10
30
50
100
COLLECTOR-BASE VOLTAGE V_{CB} (V)


G_{pe} – I_C (See Fig.1)
COMMON EMITTER
V_{CC} = 12.5 V
f = 45 MHz
Ta = 25°C
POWER GAIN G_{pe} (dB)
60
50
40
30
20
10
0
2
4
6
8
10
12
14
16
COLLECTOR CURRENT I_C (mA)


P_C – Ta
COLLECTOR POWER DISSIPATION P_C (mW)
400
300
200
100
0
0
40
80
120
160
200
AMBIENT TEMPERATURE Ta (°C)