

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

# 2SC2216, 2SC2717

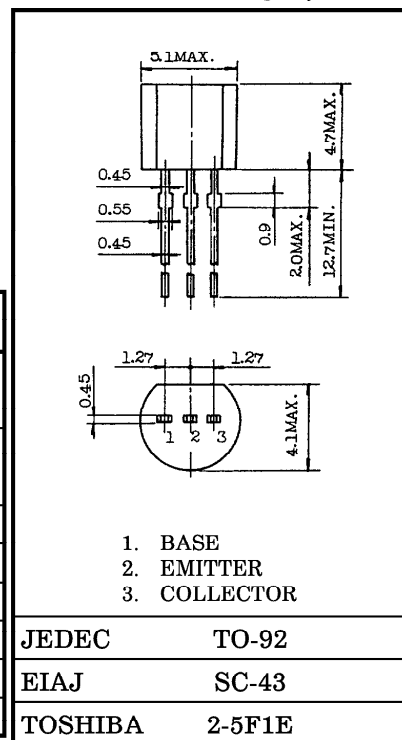
TV FINAL PICTURE IF AMPLIFIER APPLICATIONS.

Unit in mm

- High Gain :  $G_{pe} = 33\text{dB}$  (Typ.) ( $f = 45\text{MHz}$ )
- Good Linearity of  $h_{FE}$ .

**MAXIMUM RATINGS (Ta = 25°C)**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	2SC2216	50	V
	2SC2717	30	
Collector-Emitter Voltage	2SC2216	45	V
	2SC2717	25	
Emitter-Base Voltage	$V_{EBO}$	4	V
Collector Current	$I_C$	50	mA
Emitter Current	$I_E$	-50	mA
Collector Power Dissipation	$P_C$	300	mW
Junction Temperature	$T_j$	125	°C
Storage Temperature Range	$T_{stg}$	-55~125	°C



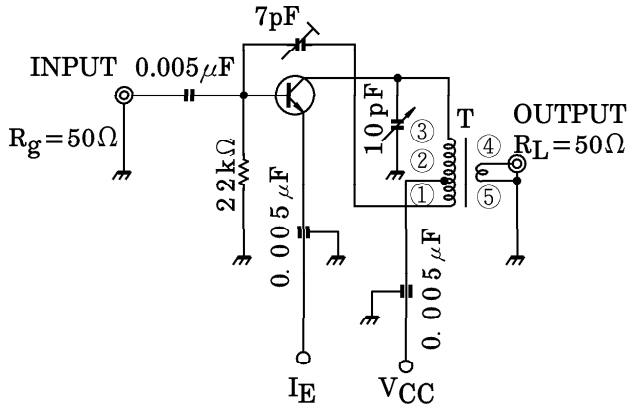
Weight : 0.21g

**ELECTRICAL CHARACTERISTICS (Ta = 25°C)**

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	2SC2216	$V_{CB} = 50\text{V}, I_E = 0$	—	—	0.1	$\mu\text{A}$
	2SC2717	$V_{CB} = 30\text{V}, I_E = 0$				
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 3\text{V}, I_C = 0$	—	—	0.1	$\mu\text{A}$
Collector-Emitter Breakdown Voltage	2SC2216	$I_C = 10\text{mA}, I_B = 0$	45	—	—	V
	2SC2717		25	—	—	
DC Current Gain	2SC2216	$V_{CE} = 12.5\text{V}, I_C = 12.5\text{mA}$	40	—	140	—
	2SC2717		40	—	240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 15\text{mA}, I_B = 1.5\text{mA}$	—	—	0.2	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 15\text{mA}, I_B = 1.5\text{mA}$	—	—	1.5	V
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 30\text{MHz}$	0.8	—	2.0	pF
Collector-Base Time Constant	$C_c \cdot r_{bb}'$	$V_{CB} = 10\text{V}, I_E = -1\text{mA}, f = 30\text{MHz}$	—	—	25	ps
Transition Frequency	$f_T$	$V_{CE} = 12.5\text{V}, I_C = 12.5\text{mA}$	300	—	—	MHz
Power Gain (Fig.)	2SC2216	$V_{CC} = 12.5\text{V}, I_E = -12.5\text{mA}, f = 45\text{MHz}$	29	—	36	dB
	2SC2717		28	—	36	

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**COIL DATA**  
 0.20mmϕ Cu WIRE  
 L=1.2μH WITH M-5 CORE  
 T : ①-② 3.0T  
       ②-③ 8.0T  
       ④-⑤ 1.0T

STATIC CHARACTERISTICS

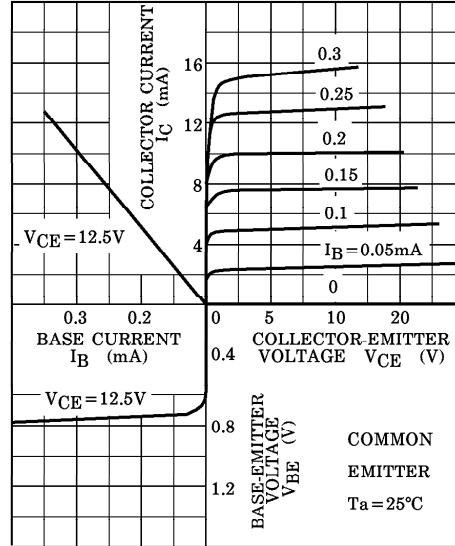
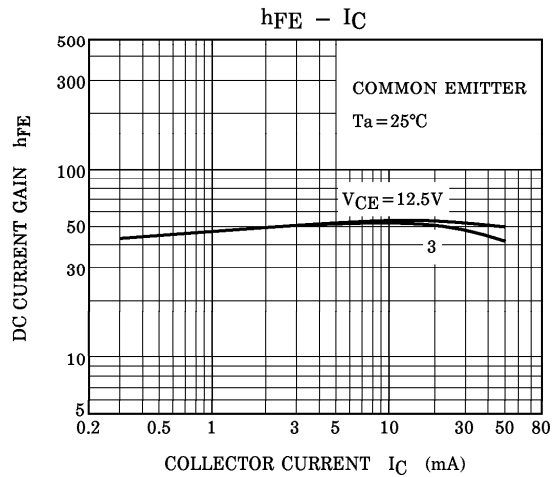
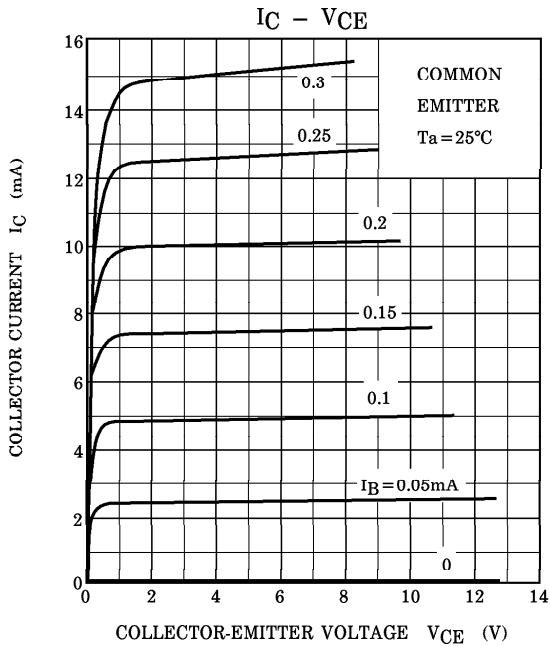


Fig. 45MHz G<sub>pe</sub> TEST CIRCUIT



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