

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

2SC2216, 2SC2717

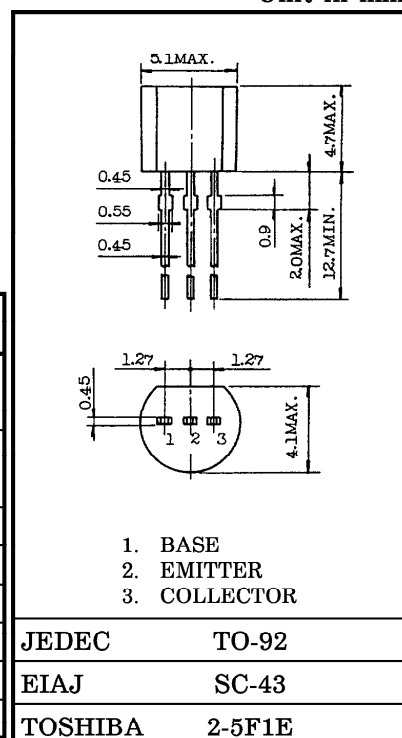
TV FINAL PICTURE IF AMPLIFIER APPLICATIONS.

Unit in mm

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

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~125	$^\circ\text{C}$



Weight : 0.21g

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	2SC2216	$V_{CB} = 50\text{V}, I_E = 0$	—	—	0.1	μA
	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	μA
Collector-Emitter Breakdown Voltage	2SC2216	$V_{(BR)CEO}$ $I_C = 10\text{mA}, I_B = 0$	45	—	—	V
	2SC2717		25	—	—	
DC Current Gain	2SC2216	h_{FE} $V_{CE} = 12.5\text{V}, I_C = 12.5\text{mA}$	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	G_{pe} $V_{CC} = 12.5\text{V}, I_E = -12.5\text{mA}, f = 45\text{MHz}$	29	—	36	dB
	2SC2717		28	—	36	

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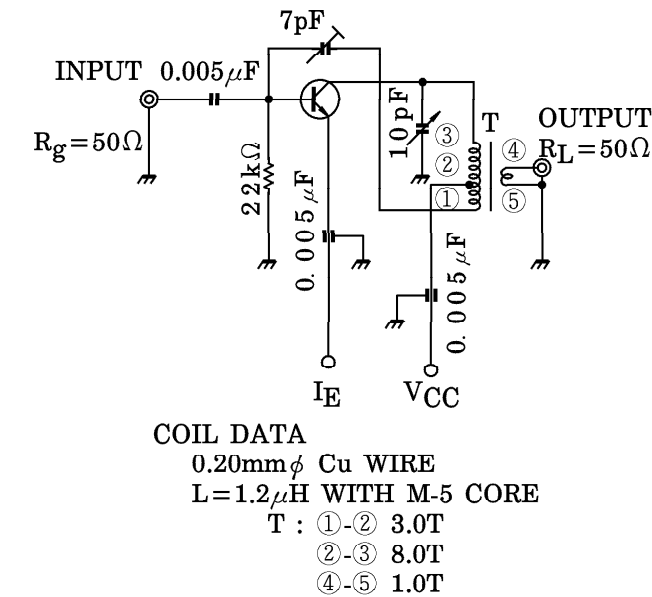
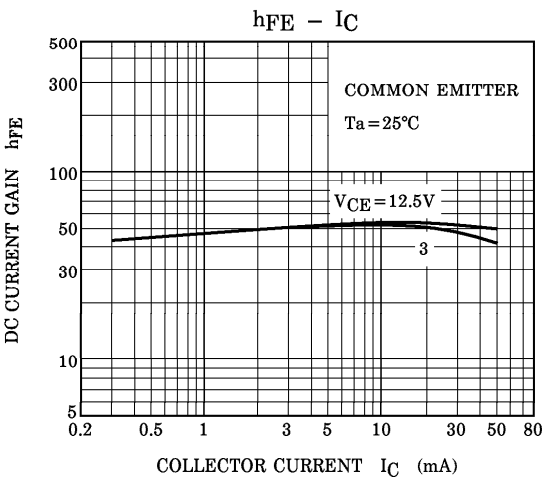
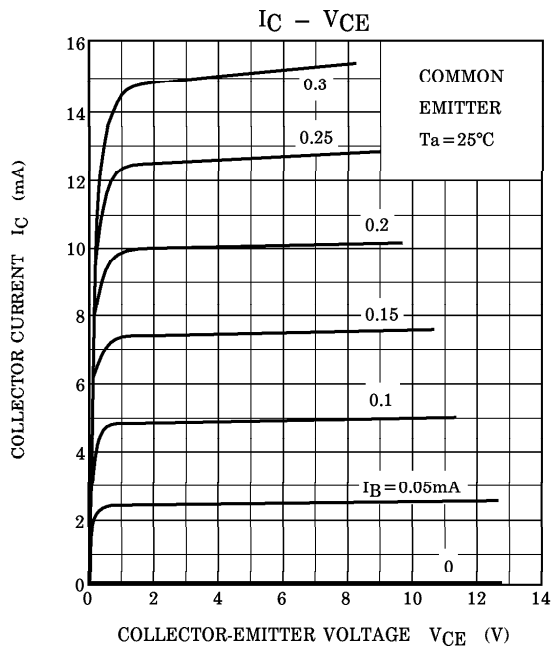
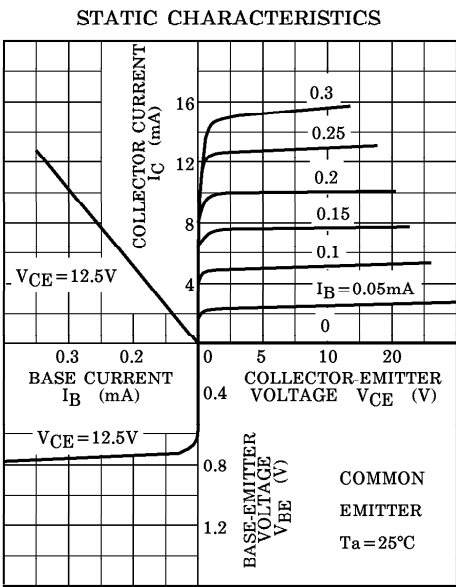


Fig. 45MHz G_{pe} TEST CIRCUIT



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