

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL PLANAR TYPE

2SC383TM, 2SC388ATM

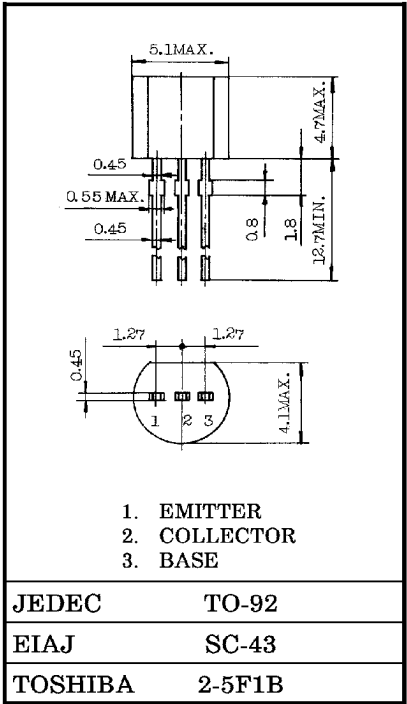
TV FINAL PICTURE IF AMPLIFIER APPLICATIONS.

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	2SC383TM	V_{CBO}	50	V
	2SC388ATM		30	
Collector Emitter Voltage	2SC383TM	V_{CEO}	45	V
	2SC388ATM		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	$^{\circ}\text{C}$



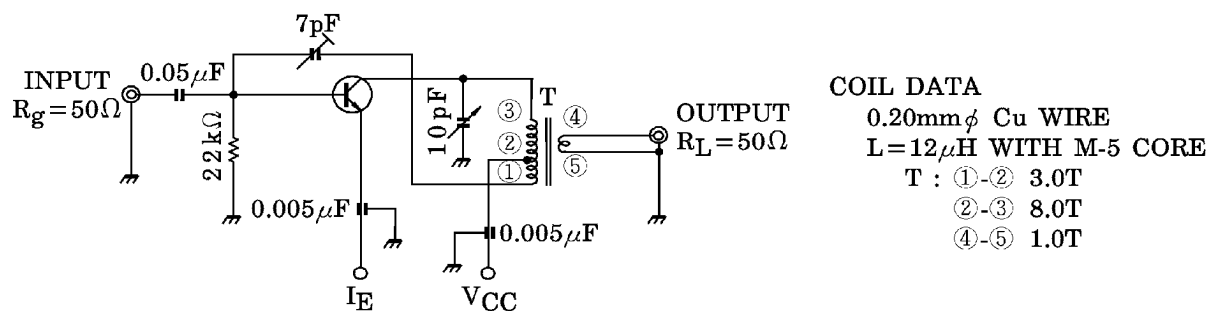
ELECTRICAL CHARACTERISTICS ($T_a = 25^{\circ}\text{C}$)

Weight : 0.21g

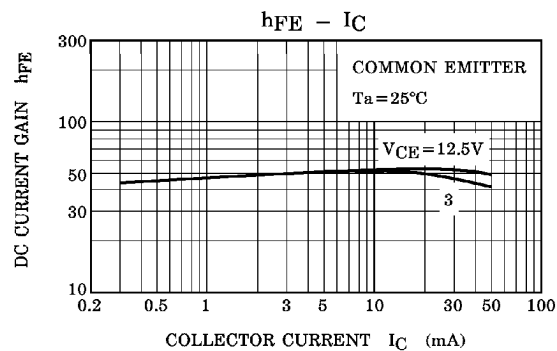
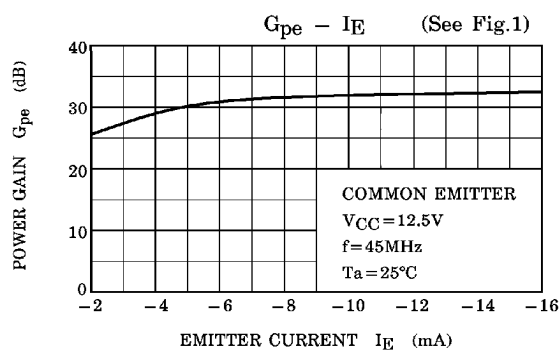
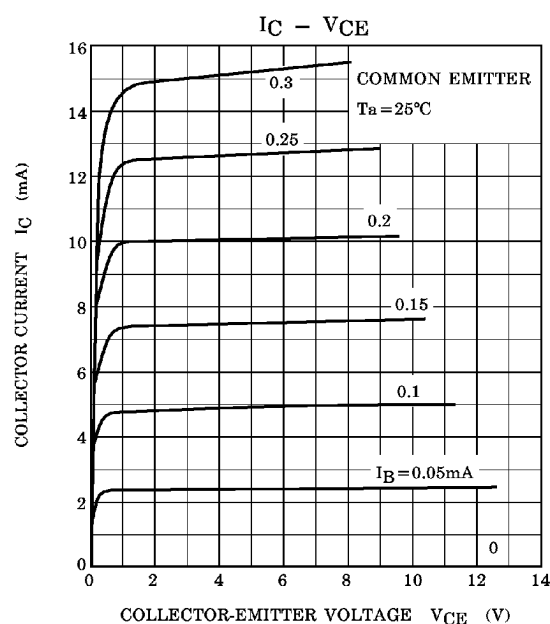
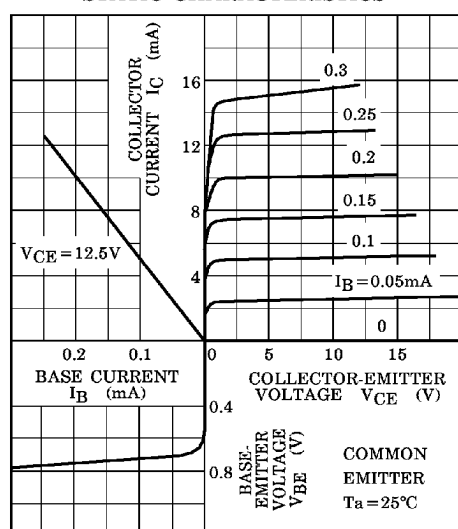
CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	2SC383TM	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$	—	—	0.1	μA
	2SC388ATM		$V_{CB}=30\text{V}, I_E=0$	—	—	0.1	
Emitter Cut-off Current		I_{EBO}	$V_{EB}=3\text{V}, I_C=0$	—	—	0.1	
Collector-Emitter Breakdown Voltage	2SC383TM	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	45	—	—	V
	2SC388ATM			25	—	—	
DC Current Gain	2SC383TM	h_{FE}	$V_{CE}=12.5\text{V}, I_C=12.5\text{mA}$	20	—	100	—
	2SC388ATM			20	—	200	
Saturation Voltage	Collector-Emitter	$V_{CE(sat)}$	$I_C=15\text{mA}, I_B=1.5\text{mA}$	—	—	0.2	V
	Base-Emitter	$V_{BE(sat)}$		—	—	1.5	
Collector Output Capacitance		C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=\text{MHz}$	0.8	—	2.0	pF
Collector-Base Time Constant		$C_{c,rb'b'}$	$V_{CB}=10\text{V}, I_E=-1\text{mA}, f=30\text{MHz}$	—	—	25	ps
Transition Frequency		f_T	$V_{CE}=12.5\text{V}, I_C=12.5\text{mA}$	300	—	—	MHz
Power Gain (Fig.1)	2SC383TM	G_{pe}	$V_{CC}=12.5\text{V}, I_E=-12.5\text{mA}, f=45\text{MHz}$	29	—	36	dB
	2SC388ATM			28	—	36	

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Fig.1 45MHz G_{pe} TEST CIRCUIT

STATIC CHARACTERISTICS



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