



## TO-92 Plastic-Encapsulate Transistors

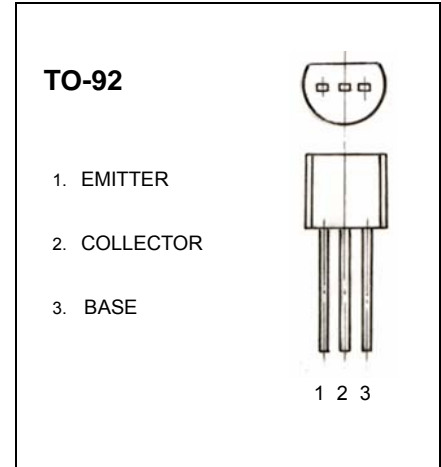
### 2SC388 TRANSISTOR (NPN)

#### FEATURES

TV final pictureif amplifier applications

#### MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V <sub>CBO</sub>	Collector-Emitter Voltage	30	V
V <sub>CEO</sub>	Collector-Emitter Voltage	25	V
V <sub>EBO</sub>	Emitter-Base Voltage	4	V
I <sub>C</sub>	Collector Current -Continuous	50	mA
P <sub>C</sub>	Collector Power dissipation	300	mW
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C



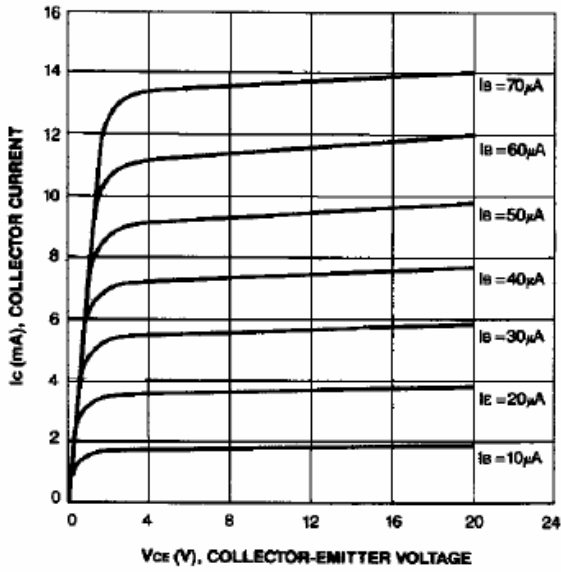
#### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10μA, I <sub>E</sub> =0	30			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =5mA, I <sub>B</sub> =0	25			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0	4			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =30V, I <sub>E</sub> =0			0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =3V, I <sub>C</sub> =0			0.1	μA
DC current gain	h <sub>FE(1)</sub>	V <sub>CE</sub> =12.5V, I <sub>C</sub> =12.5mA	20		200	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =15mA, I <sub>B</sub> =1.5mA			0.2	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =15mA, I <sub>B</sub> =1.5mA			1.2	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =12.5V, I <sub>C</sub> =12.5mA	300			MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz	0.8		2	pF
Power Gain	G <sub>pe</sub>	V <sub>CC</sub> =12.5V, I <sub>E</sub> =-12.5mA, f=45MHz	28		36	dB

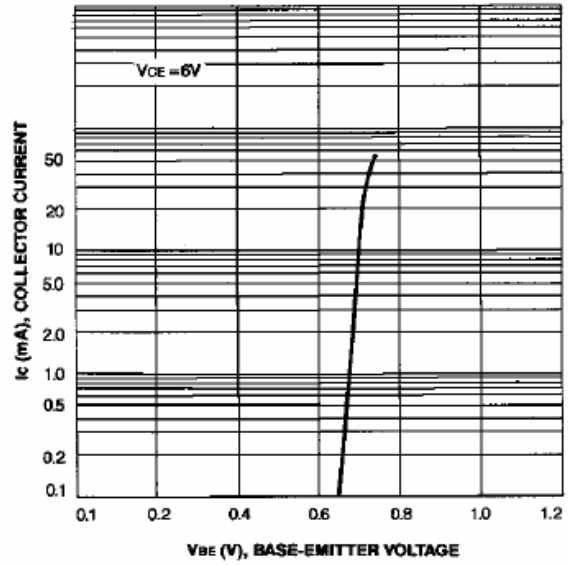
# Typical Characteristics

2SC388

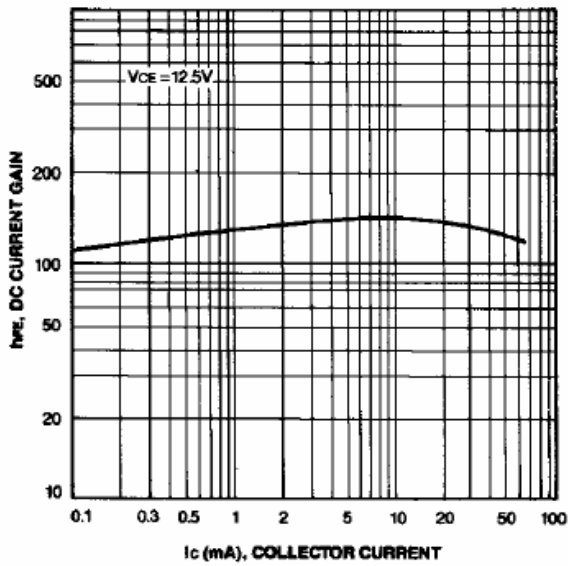
**STATIC CHARACTERISTIC**



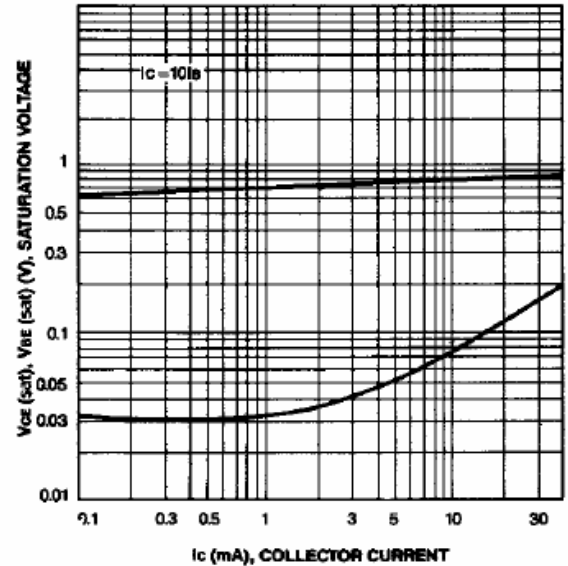
**BASE-EMITTER ON VOLTAGE**



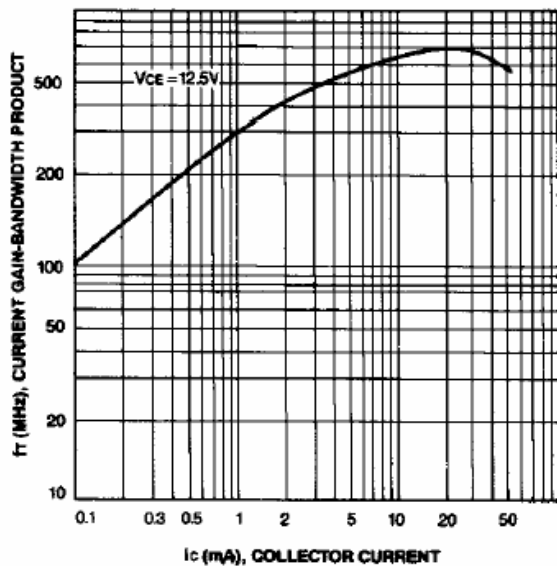
**DC CURRENT GAIN**



**BASE-EMITTER SATURATION VOLTAGE  
COLLECTOR-EMITTER SATURATION VOLTAGE**



**CURRENT GAIN-BANDWIDTH PRODUCT**



**COLLECTOR INPUT CAPACITANCE  
COLLECTOR OUTPUT CAPACITANCE**

