

## TO-92 Plastic-Encapsulate Transistors

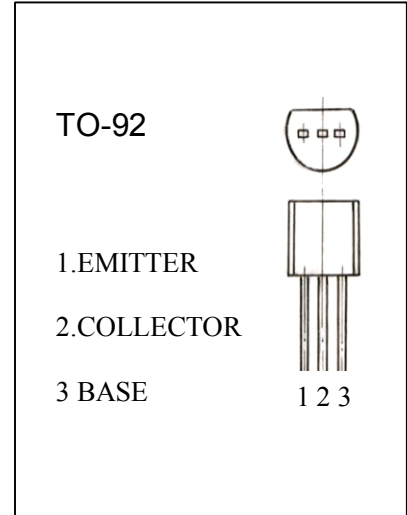
### A733 TRANSISTOR (PNP)

#### FEATURE

Power dissipation

#### MAXIMUM RATINGS (TA=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	-60	V
V <sub>CE0</sub>	Collector-Emitter Voltage	-50	V
V <sub>EB0</sub>	Emitter-Base Voltage	-5	V
I <sub>c</sub>	Collector Current -Continuous	-100	mA
P <sub>c</sub>	Collector Power Dissipation	250	mW
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Junction and Storage Temperature	-55-150	°C



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

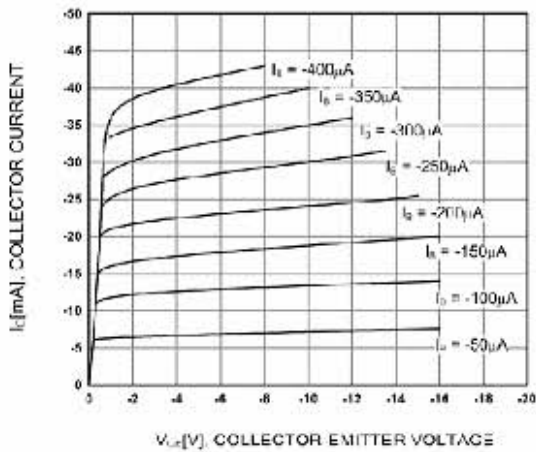
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>c</sub> = -50μA, I <sub>E</sub> =0	-60			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>c</sub> = -1mA, I <sub>B</sub> =0	-50			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -50μA, I <sub>c</sub> =0	-5			V
Collector cut-off current	I <sub>cBO</sub>	V <sub>CB</sub> = -60V, I <sub>E</sub> =0			-0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5 V, I <sub>c</sub> =0			-0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = -6V, I <sub>c</sub> = -1mA	90	200	600	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> = -100mA, I <sub>B</sub> =-10mA		-0.18	-0.3	V
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> =-6V, I <sub>c</sub> =-1.0mA	-0.58	-0.62	-0.68	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-6V, I <sub>c</sub> =-10mA	100			MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz			6	pF
Noise figure	NF	V <sub>CE</sub> =-6V, I <sub>c</sub> =-0.3mA, R <sub>g</sub> =10kΩ, f=100Hz			20	dB

#### CLASSIFICATION OF hFE

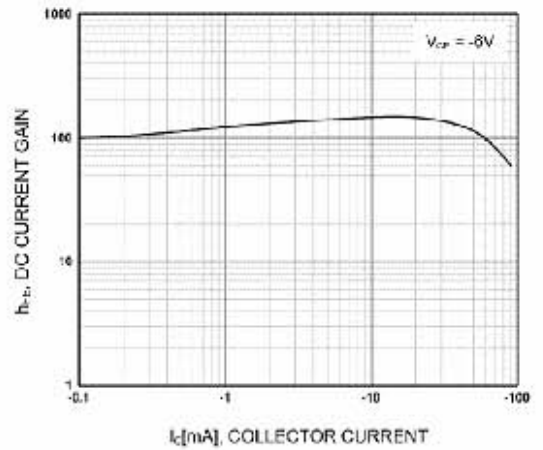
Rank	R	Q	P	K
Range	90-180	135-270	200-400	300-600

# Typical Characteristics

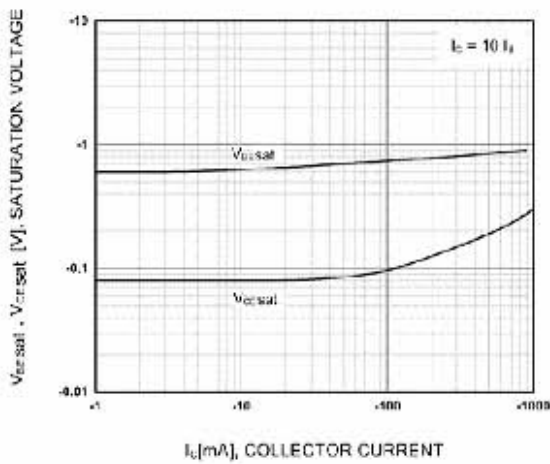
A733



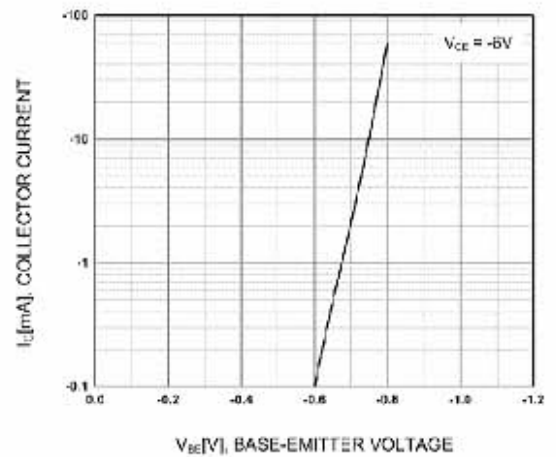
Static Characteristic



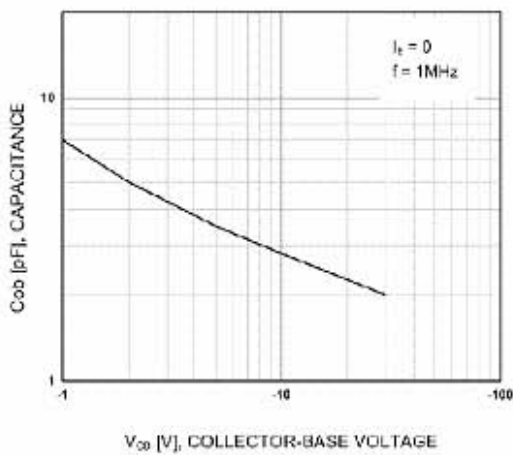
DC current Gain



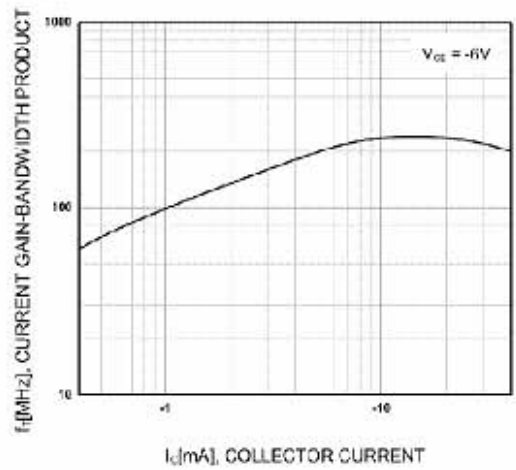
Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage



Base-Emitter On Voltage



Collector Output Capacitance



Current Gain Bandwidth Product