



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

A733 TRANSISTOR(PNP)

FEATURE

Power dissipation

MAXIMUM RATINGS* $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-100	mA
P_D	Total Device Dissipation	250	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Junction and Storage Temperature	-55-150	$^{\circ}\text{C}$

TO-92

1. EMITTER
2. COLLECTOR
3. BASE



*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

ELECTRICAL CHARACTERISTICS($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)

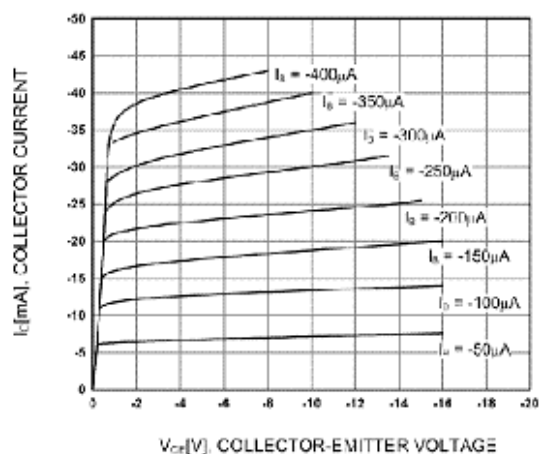
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	$I_C = -50\mu\text{A}, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C = -1\text{mA}, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_E = -50\mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -60\text{V}, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	90	200	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$		-0.18	-0.3	V
Base-emitter voltage	V_{BE}	$V_{CE} = -6\text{V}, I_C = -1.0\text{mA}$	-0.58	-0.62	-0.68	V
Transition frequency	f_T	$V_{CE} = -6\text{V}, I_C = -10\text{mA}$	100	180		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		4.5	6	pF
Noise figure	NF	$V_{CE} = -6\text{V}, I_C = -0.3\text{mA}, R_g = 10\text{k}\Omega, f = 100\text{Hz}$		6	20	dB

CLASSIFICATION OF h_{FE}

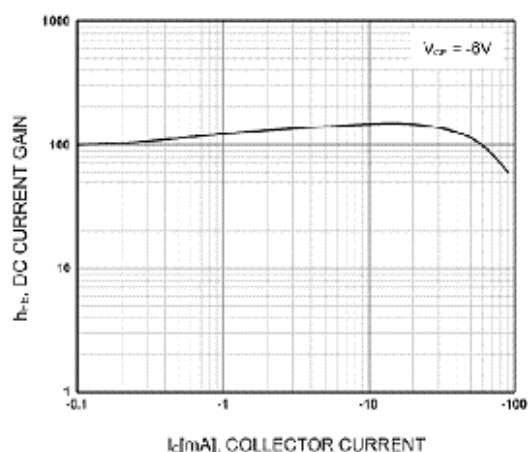
Rank	R	Q	P	K
Range	90-180	135-270	200-400	300-600

Typical Characteristics

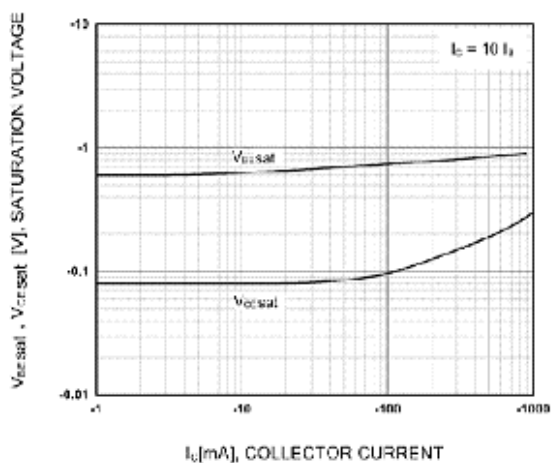
A733



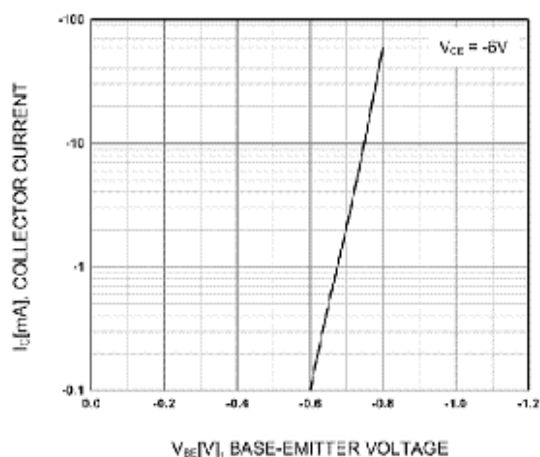
Static Characteristic



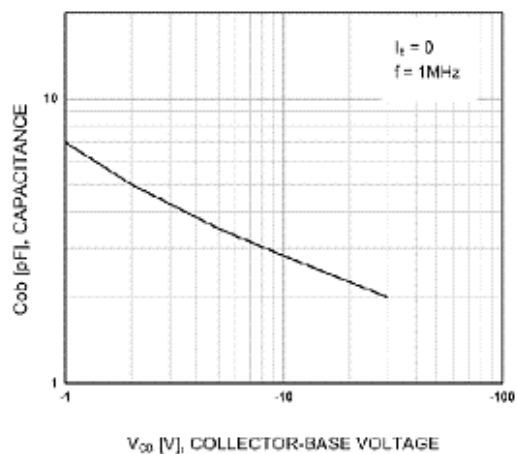
DC current Gain



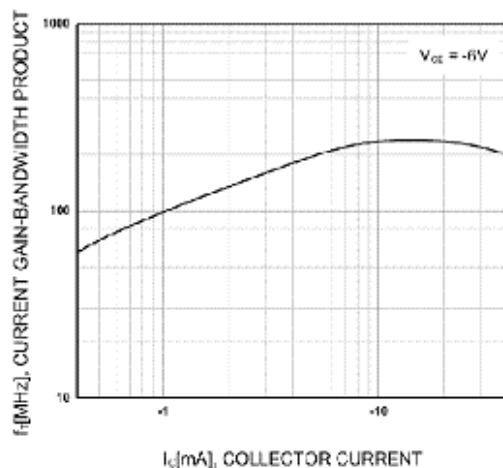
Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage



Base-Emitter On Voltage



Collector Output Capacitance



Current Gain Bandwidth Product