

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

FEATURES

- Complementary of the 2SC945
- Collector to base voltage: -60V

MARKING

Product	Marking Code
2SA733	CS

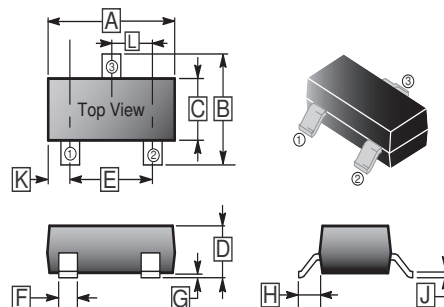
CLASSIFICATION OF h_{FE}

Product-Rank	2SA733-L	2SA733-H
Range	120~220	200~475

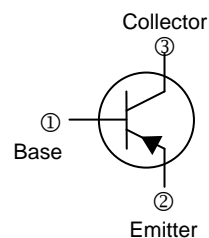
PACKAGE INFORMATION

Package	MPQ	LeaderSize
SOT-23	3K	7' inch

SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.04	G	0.09	0.18
B	2.10	2.55	H	0.45	0.60
C	1.20	1.40	J	0.08	0.177
D	0.89	1.15	K	0.6 REF.	
E	1.78	2.04	L	0.89	1.02
F	0.30	0.50			



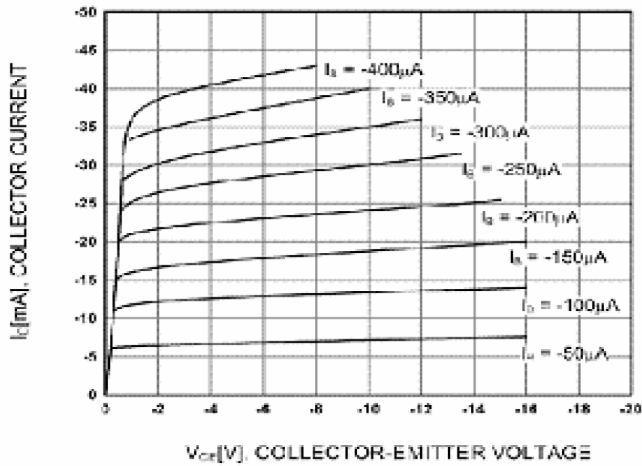
ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	-60	V
Collector to Emitter Voltage	V_{CEO}	-50	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-150	mA
Collector Power Dissipation	P_C	200	mW
Junction, Storage Temperature	T_J, T_{STG}	150, -55 ~ 150	$^\circ\text{C}$

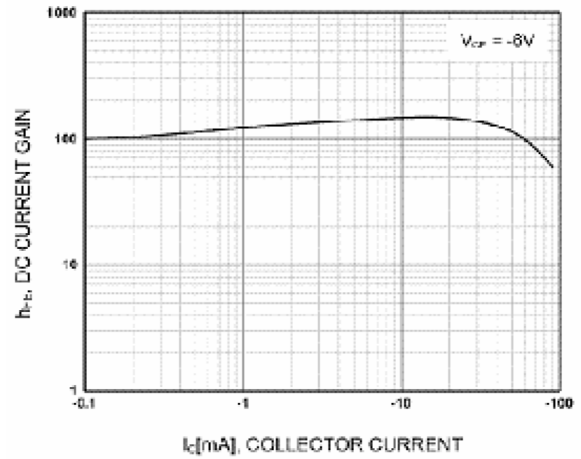
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	-60	-	-	V	$I_C = -5\mu\text{A}, I_E = 0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	-50	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -50\mu\text{A}, I_C = 0$
Collector Cut-Off Current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -60\text{V}, I_E = 0$
Emitter Cut-Off Current	I_{EBO}	-	-	-0.1	μA	$V_{EB} = -5\text{V}, I_C = 0$
DC Current Gain	h_{FE}	120	-	475		$V_{CE} = -6\text{V}, I_C = -1\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-0.18	-0.3	V	$I_C = -100\text{mA}, I_B = -10\text{mA}$
Base to Emitter Saturation Voltage	$V_{BE(on)}$	-0.58	-0.62	-0.68	V	$V_{CE} = -6\text{V}, I_C = -1.0\text{mA}$
Transition Frequency	f_T	50	-	-	MHz	$V_{CE} = -6\text{V}, I_C = -10\text{mA}$
Collector Output Capacitance	C_{ob}	-	4.5	7	pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$
Noise Figure	NF	-	6	20	dB	$V_{CE} = -6\text{V}, I_C = -0.3\text{mA}, f = 100\text{Hz}, R_G = 10\text{K}\Omega$

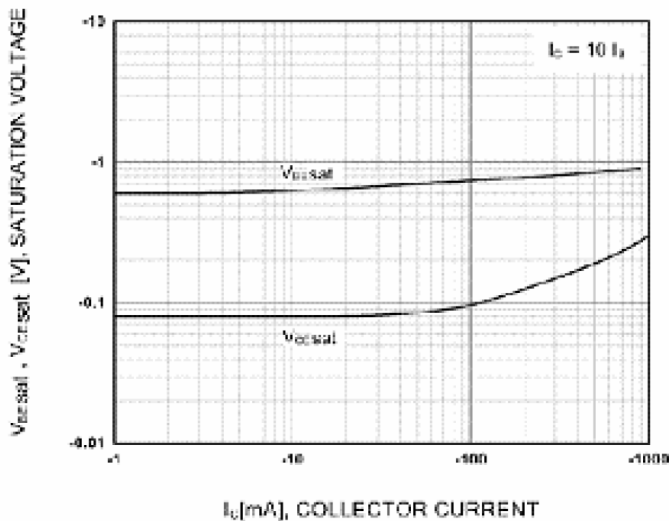
CHARACTERISTIC CURVES



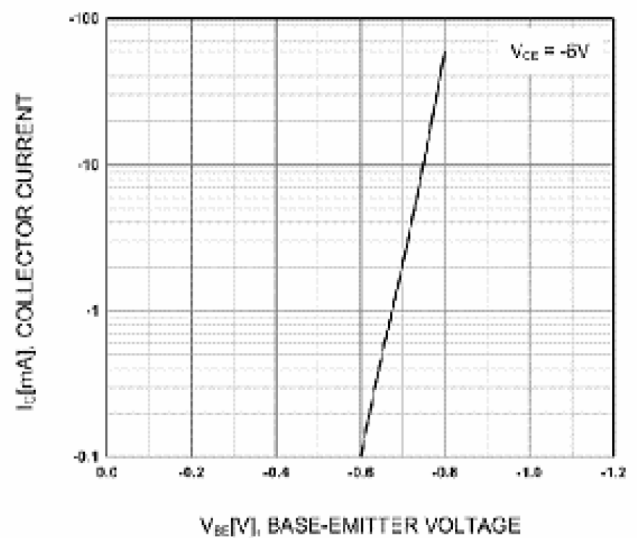
Static Characteristic



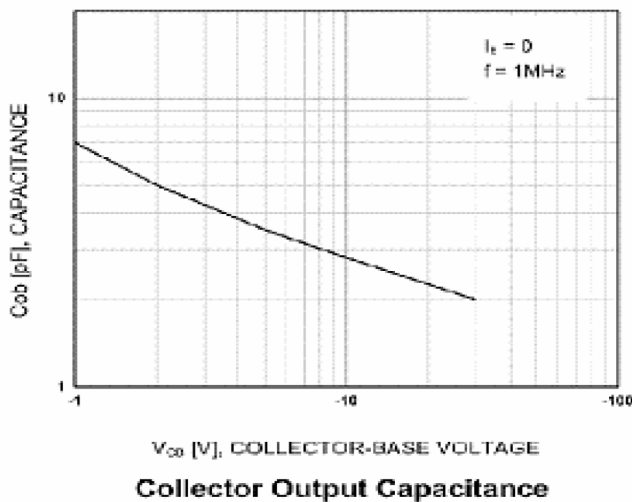
DC current Gain



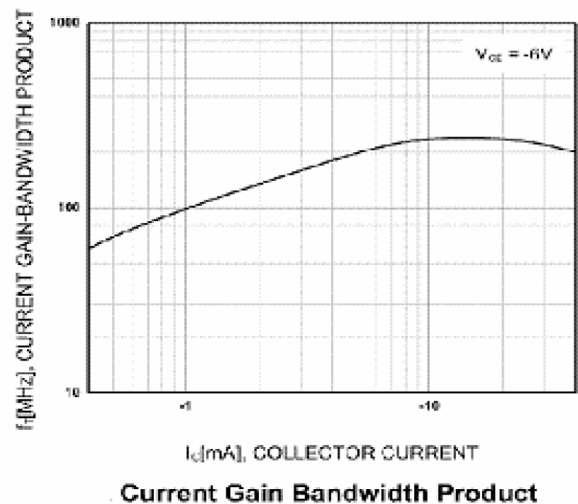
**Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**



Base-Emitter On Voltage



Collector Output Capacitance



Current Gain Bandwidth Product