



**浩畅半导体**  
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**A733** TRANSISTOR (PNP)

**SOT-23 Plastic-Encapsulate Transistors**

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客户确认：

公司签章：

部门

工程部

品保部

采购部

签名

日期



**SOT-23 Plastic-Encapsulate Transistors**

**A733** TRANSISTOR (PNP)

**FEATURE**

- Collector-Base Voltage
- Complement to C945

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

Symbol	Parameter	Value	Units
$V_{CB0}$	Collector-Base Voltage	-60	V
$V_{CE0}$	Collector-Emitter Voltage	-50	V
$V_{EB0}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-150	mA
$P_C$	Collector Power Dissipation	200	mW
$T_j$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^{\circ}\text{C}$

**SOT-23**



1. BASE
2. EMITTER
3. COLLECTOR

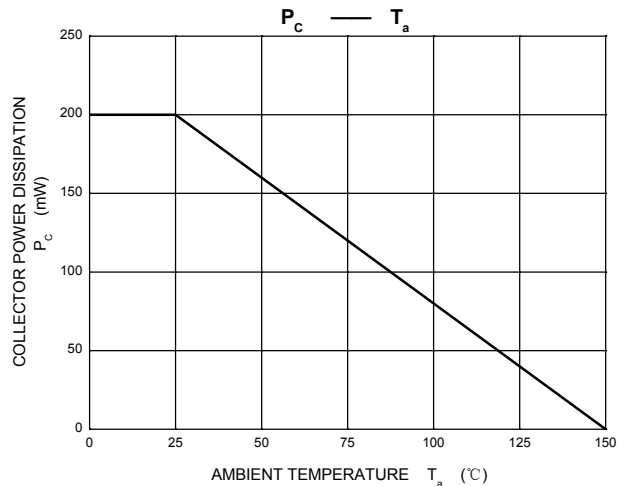
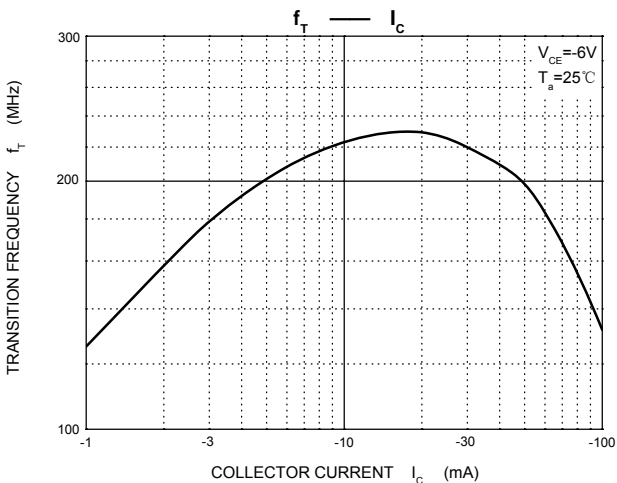
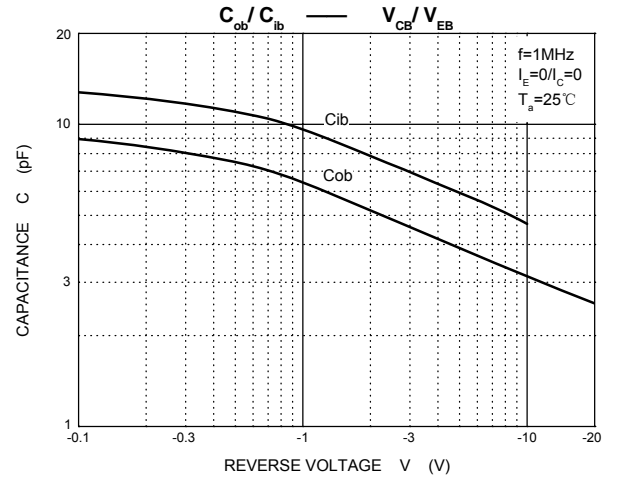
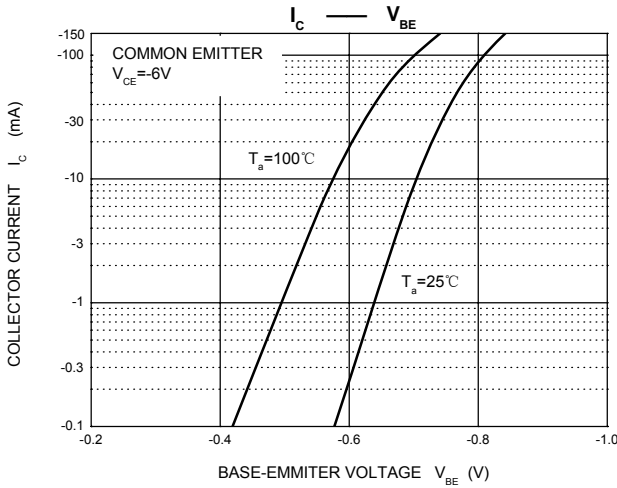
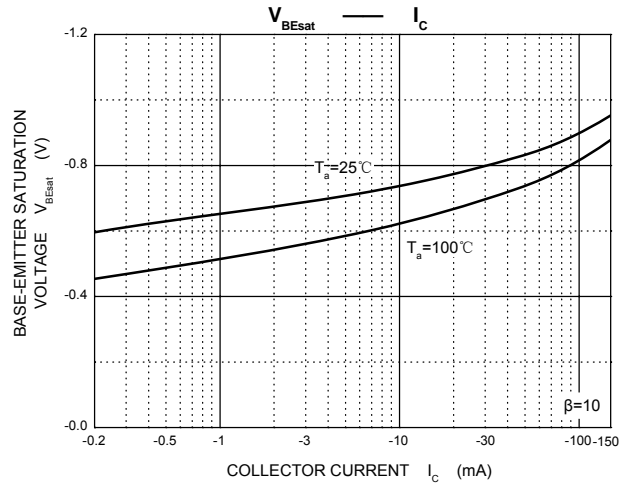
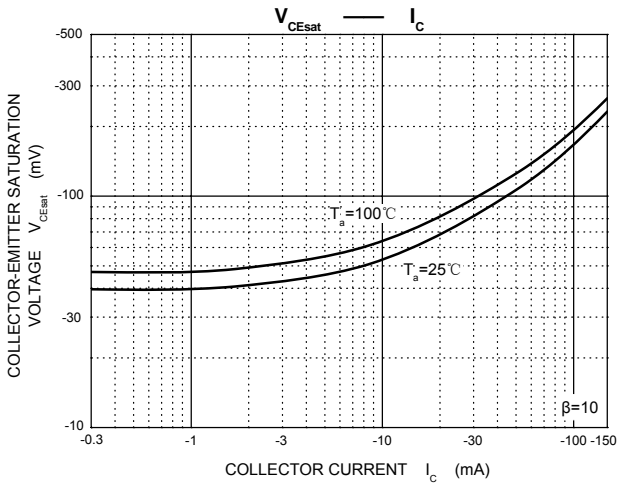
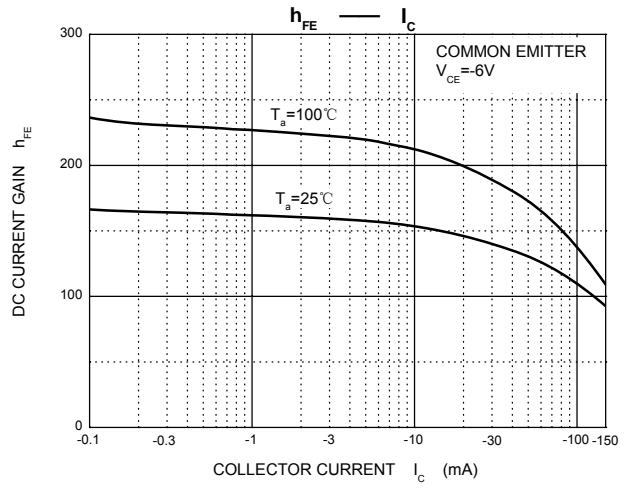
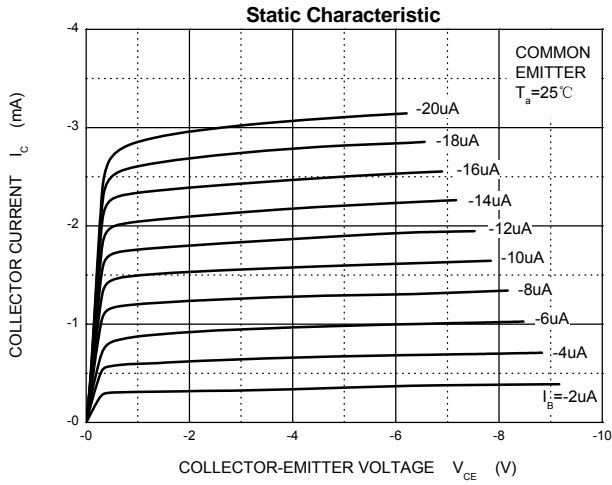
**ELECTRICAL CHARACTERISTICS** ( $T_{amb}=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CB0}$	$I_C = -5\mu\text{A}, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V(BR)_{CE0}$	$I_C = -1\text{mA}, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V(BR)_{EB0}$	$I_E = -50\mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	$I_{CB0}$	$V_{CB} = -60\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	120		475	
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	$V_{BE(on)}$	$V_{CE} = -6\text{V}, I_C = -1.0\text{mA}$	-0.58	-0.62	-0.68	V
Transition frequency	$f_T$	$V_{CE} = -6\text{V}, I_C = -10\text{mA}$	50			MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		4.5	7	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	L	H
Range	120-220	220-475
MARKING	CS	

# Typical Characteristics



## SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

## SOT-23 Suggested Pad Layout



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.