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C945 TRANSISTOR (NPN)

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

C945 TRANSISTOR (NPN)

SOT-23



- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

FEATURE

- Excellent h_{FE} Linearity
- Low noise
- Complementary to A733

MARKING:CR •

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

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

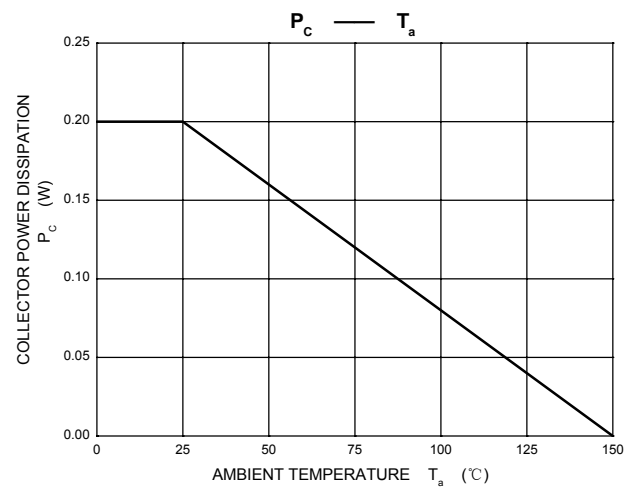
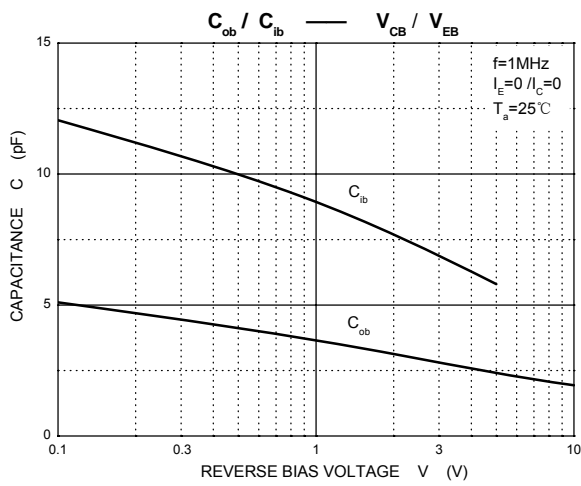
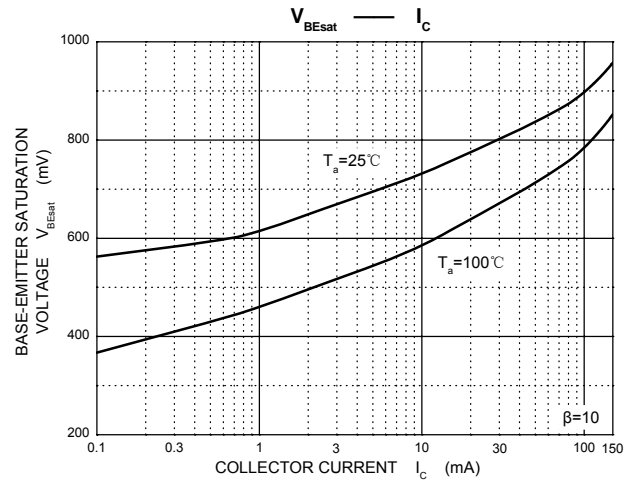
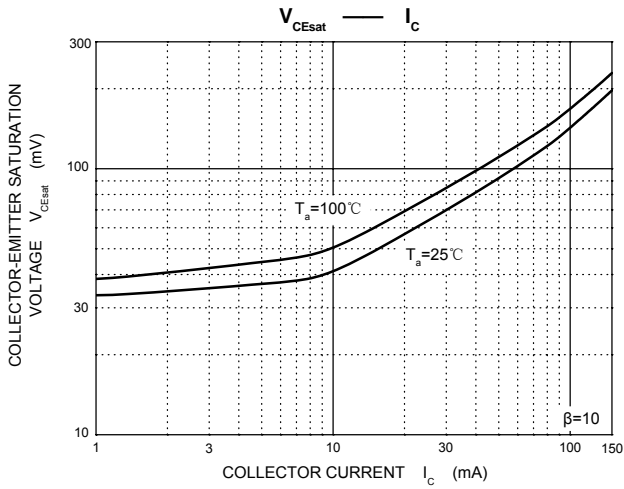
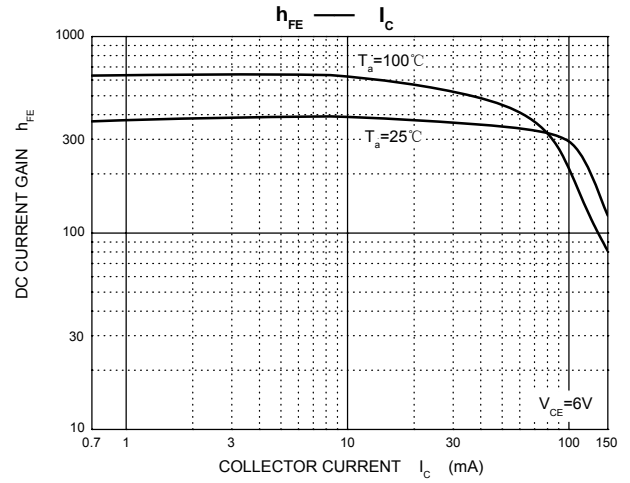
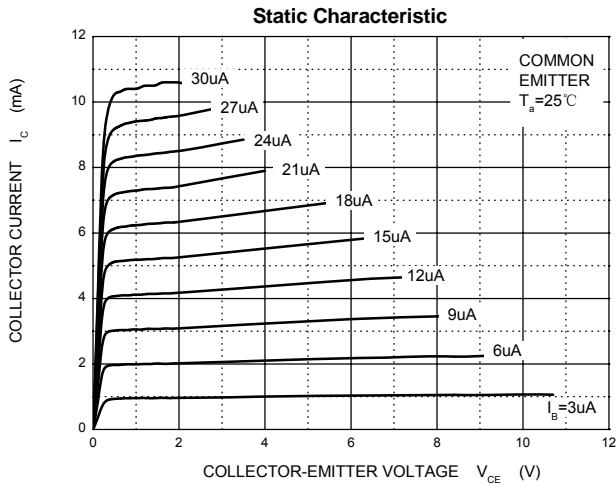
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	$I_C=100\mu A, I_E=0$				V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	$I_C=1mA, I_B=0$				V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	$I_E=0.1mA, I_C=0$				V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$			0.1	μA
Collector cut-off current	I_{CER}	$V_{CE}=55V, R=10M\Omega$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=6V, I_C=1mA$	130	400		
	$h_{FE(2)}$	$V_{CE}=6V, I_C=0.1mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=10mA$			1	V
Transition frequency	f_T	$V_{CE}=6V, I_C=10mA, f=30MHz$	150			MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			3.0	pF
Noise figure	NF	$V_{CE}=6V, I_C=0.1mA$ $R_g=10k\Omega, f=1kHz$	4		10	dB

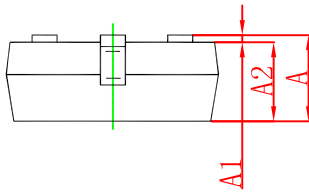
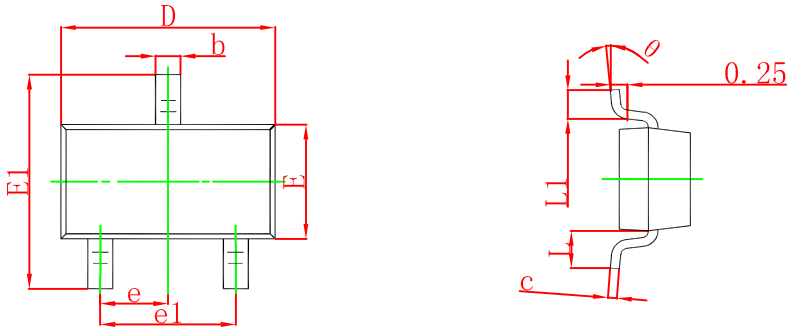
CLASSIFICATION OF $h_{FE(1)}$

Rank	L H	
Range	130-200 200-	400

Typical Characteristics

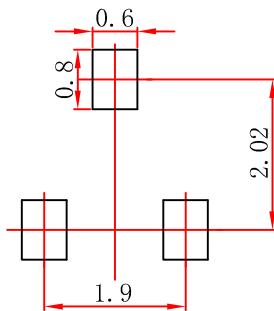


SOT-23 Package Outline Dimensions



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.