

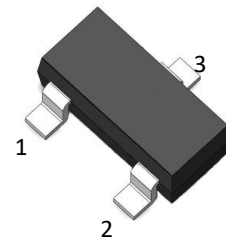
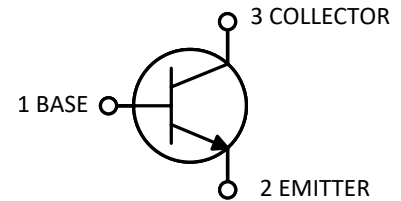
»Features

$$V_{CE} = 60V$$

$$I_C = 100mA$$

$$f_T = 150MHz @ V_{CE}=5V, I_C=10mA, f=30MHz$$

»Pin Configurations



»General Description

- Epitaxial planar die construction
- SOT-23 Plastic Package.

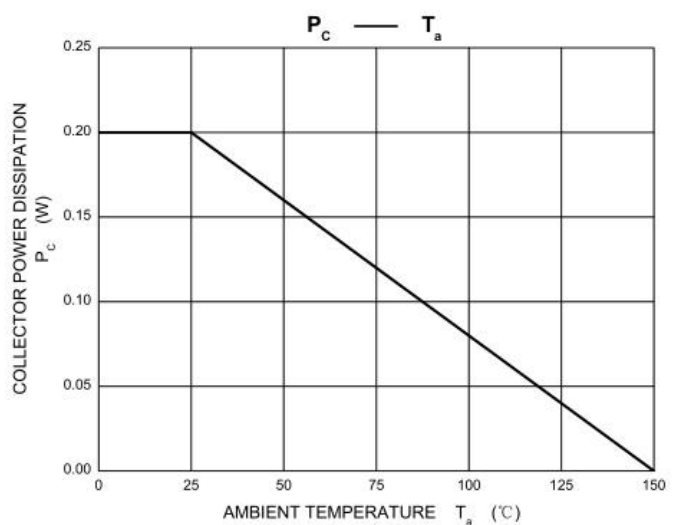
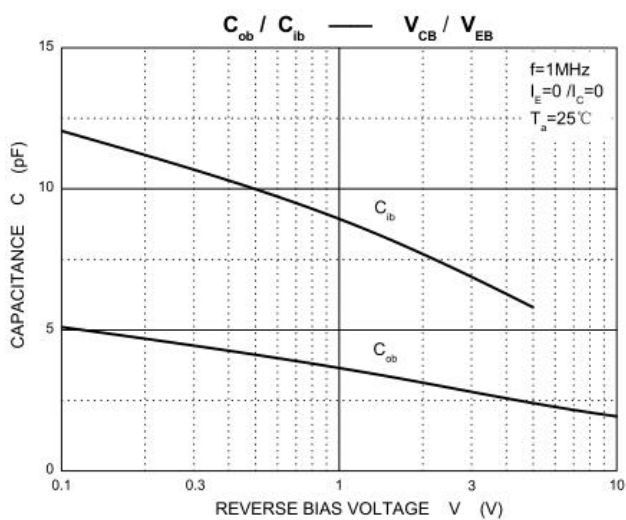
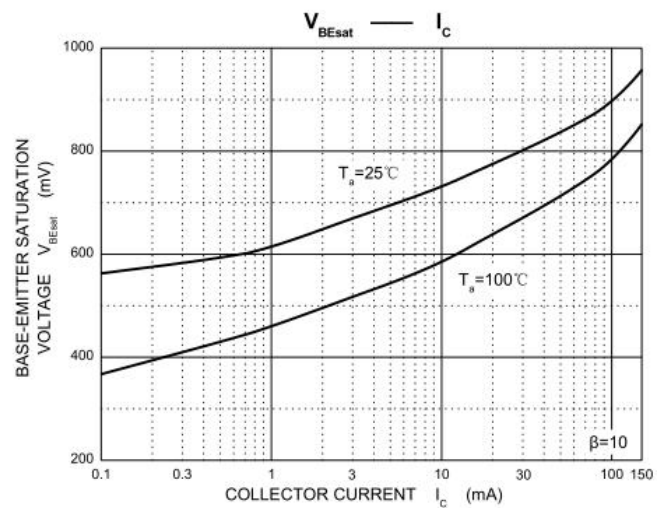
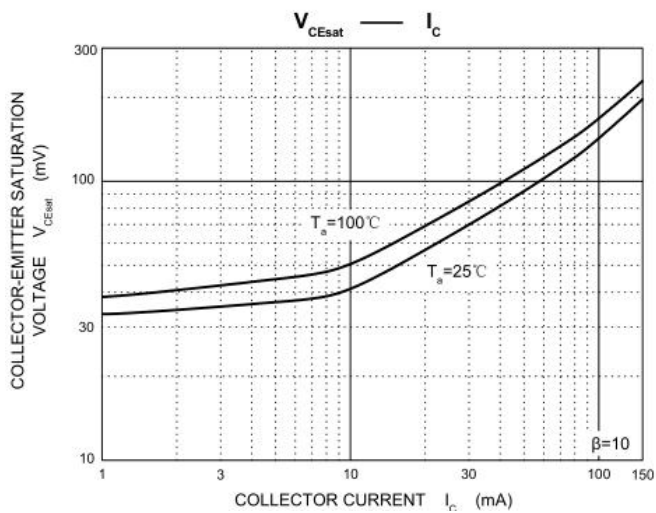
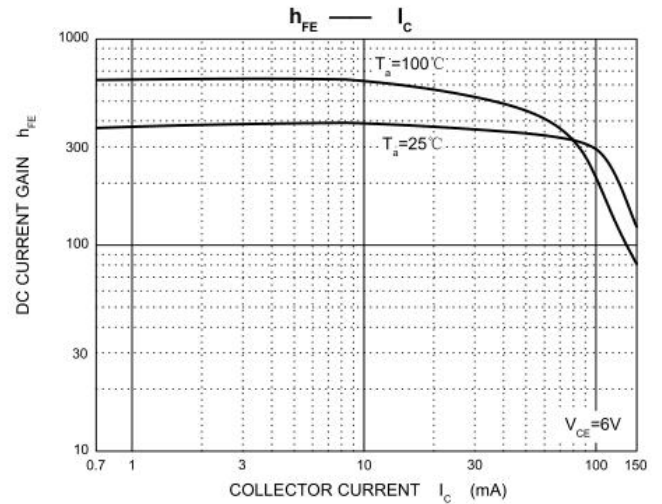
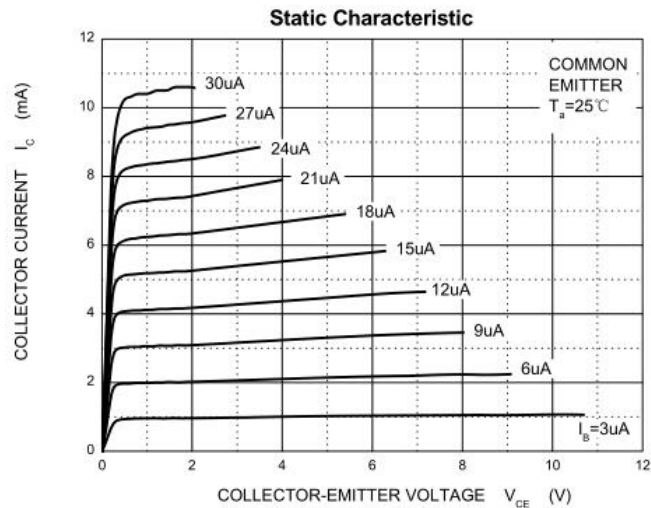
»Absolute Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
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	100	mA
P _C	Collector Power Dissipation	200	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	625	°C/W
T _J , T _{stg}	Operation Junction And Storage Temperature Range	-55~+150	°C

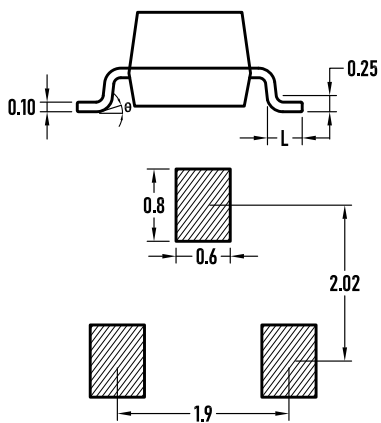
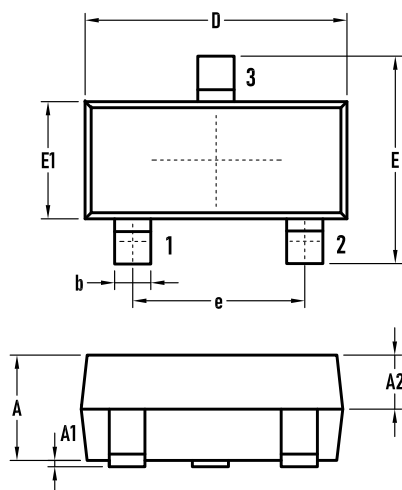
»Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =100μA, I _E =0	60			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =100μA, I _B =0	50			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =100μA, I _C =0	5			V
I _{CER}	Collector cut-off current	V _{CE} =55V, R=10MΩ			0.1	μA
I _{CBO}	Collector cut-off current	V _{CB} =60V, I _E =0			0.1	μA
I _{EBO}	Emitter cut-off current	V _{EB} =5V, I _C =0			0.1	μA
h _{FE1}	DC current gain	V _{CE} =6V, I _C =1mA	130		400	
h _{FE2}	DC current gain	V _{CE} =6V, I _C =0.1mA	40			
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =100mA, I _B =10mA			0.3	V
V _{BE(sat)}	Base-emitter saturation voltage				1.0	V
f _T	Transition frequency	V _{CE} =5V, I _C =10mA, f=30MHz	150			MHz
C _{ob}	Collector output capacitance	V _{CB} =10V, I _E =0, f=1MHz			3.0	pF
NF	Noise figure	V _{CE} =6V, I _C =0.1mA R _g =10kΩ, f=1kHz		4	10	dB

»Typical Performance Characteristics (($T_J = 25^\circ\text{C}$, unless otherwise noted))

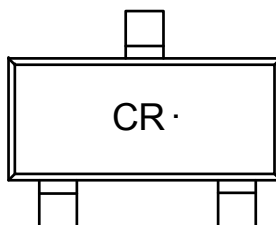


»Package Information-SOT23



SYMBOL	MILLIMETER		
	MIN.	Typ	MAX
A	0.90	1.00	1.10
A1	0.02	0.06	0.10
A2	—	0.60	—
D	2.85	2.90	2.95
b	0.37	0.40	0.43
E	2.35	2.40	2.45
E1	1.25	1.30	1.35
e	1.85	1.90	1.95
L	0.35	0.40	0.48
θ	0	—	6°

»Marking



»Ordering information

Order code	Package	Base qty	Deliverymode
C945	SOT-23	3K	Tape and reel