

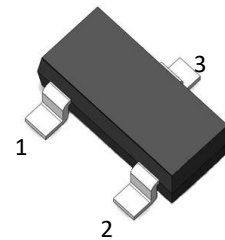
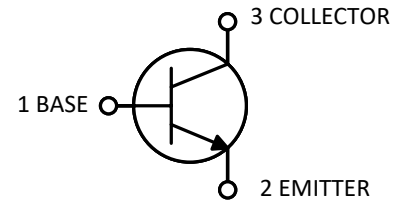
## »Features

$V_{CE} = 60V$

$I_C = 100mA$

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

## »Pin Configurations



## »General Description

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

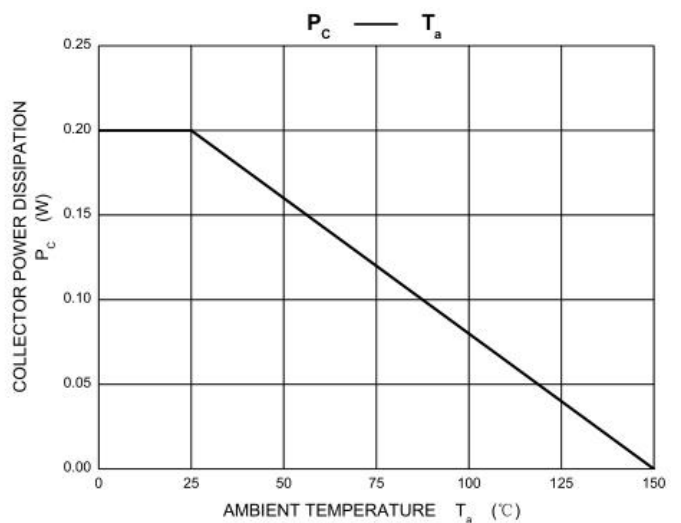
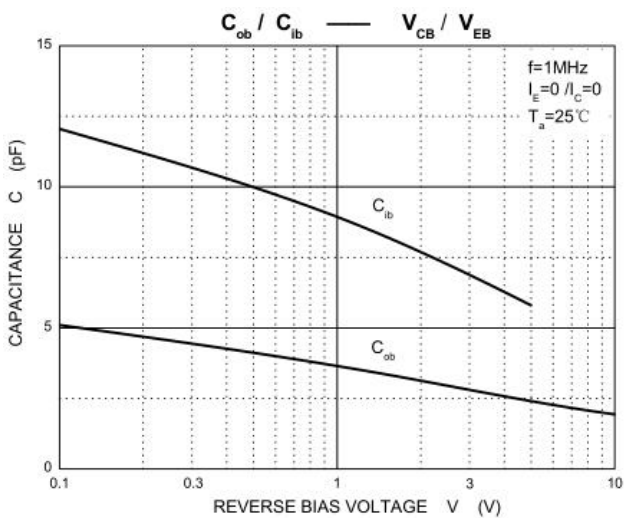
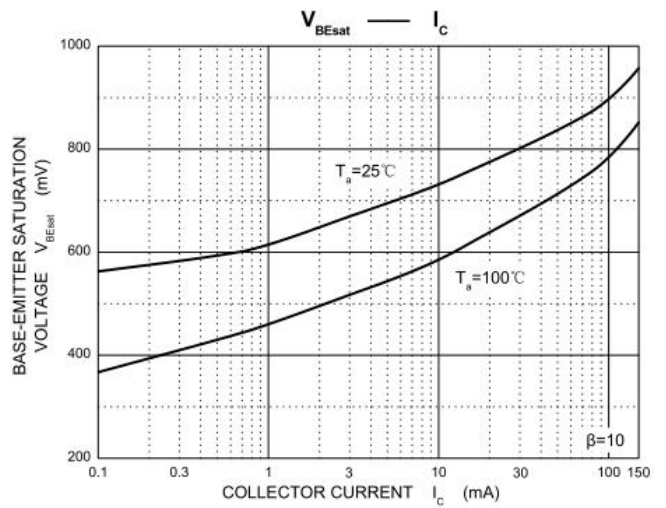
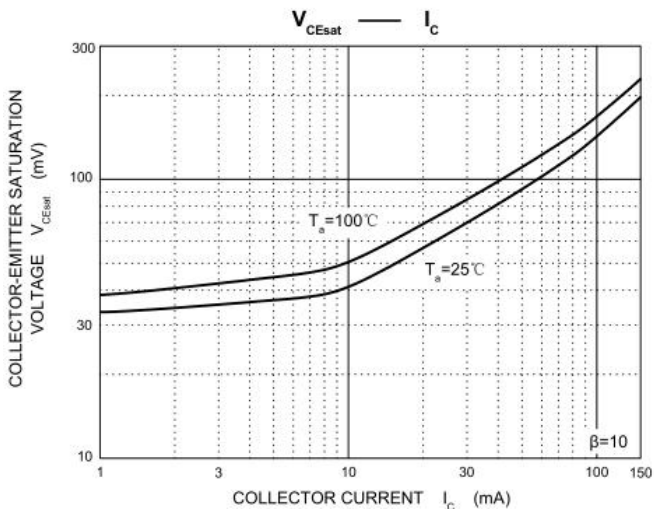
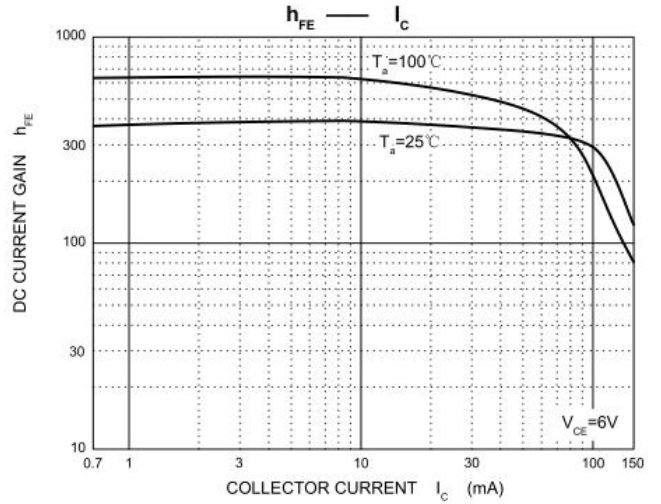
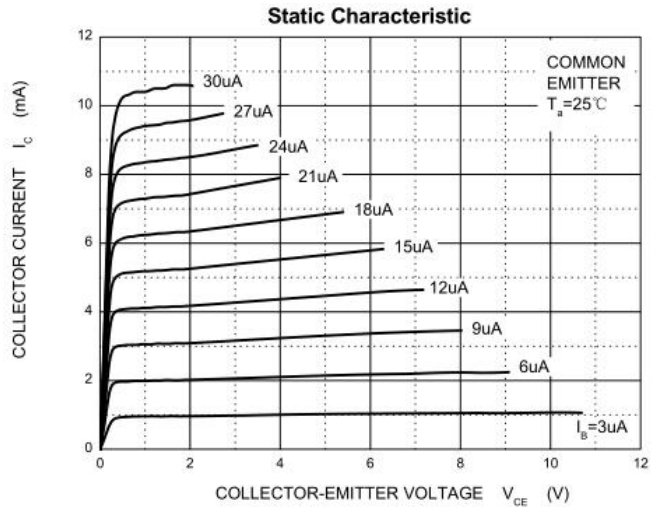
## »Absolute Maximum Ratings @ $T_A=25^{\circ}C$ unless otherwise noted

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
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	$^{\circ}C/W$
$T_J, T_{stg}$	Operation Junction And Storage Temperature Range	-55~+150	$^{\circ}C$

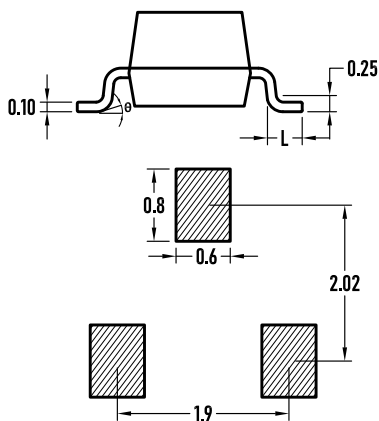
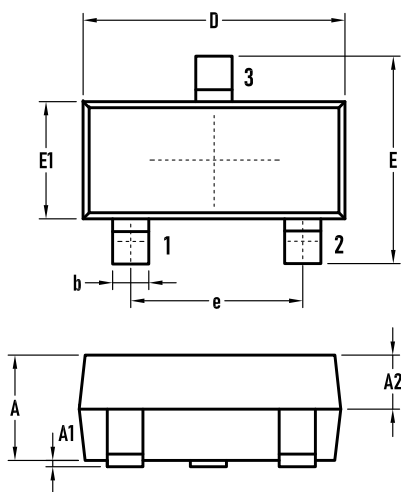
## »Electrical Characteristics @ $T_A=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	60			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=100\mu A, I_B=0$	50			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	5			V
$I_{CER}$	Collector cut-off current	$V_{CE}=55V, R=10M\Omega$			0.1	$\mu A$
$I_{CBO}$	Collector cut-off current	$V_{CB}=60V, I_E=0$			0.1	$\mu A$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
$h_{FE1}$	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	$V_{CE}=6V, I_C=0.1mA$ $R_g=10k\Omega, f=1kHz$		4	10	dB

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

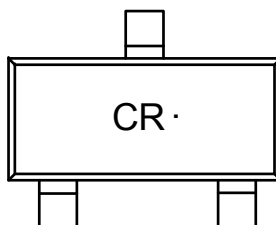


»Package Information-SOT23



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
$\theta$	0	–	6°

»Marking



»Ordering information

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

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