

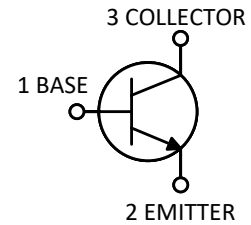
»Features

$V_{CE} = 400V$

$I_C = 0.2A$

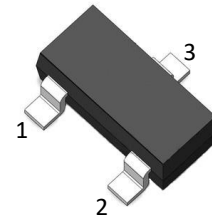
$f_T = 50MHz @V_{CE}=20V, I_C=10mA, f=30MHz$

»Pin Configurations



»General Description

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



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

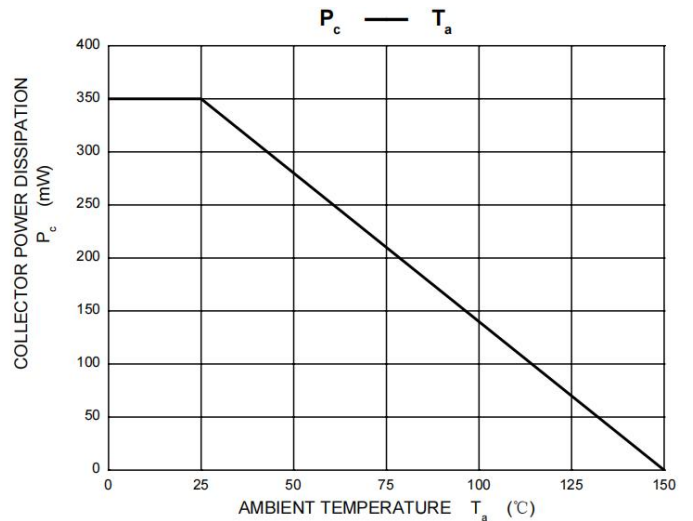
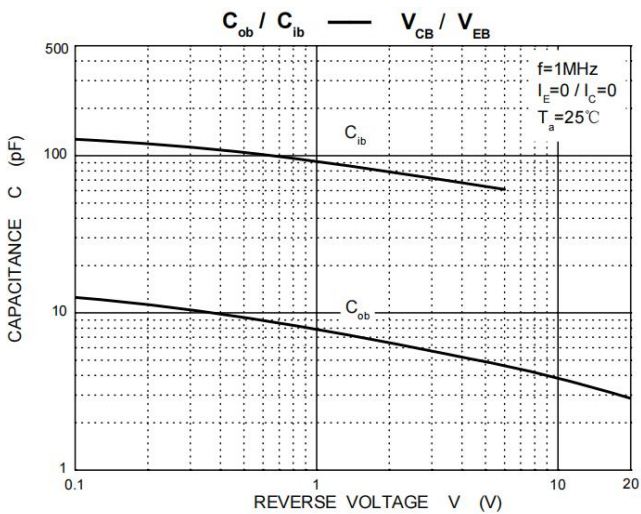
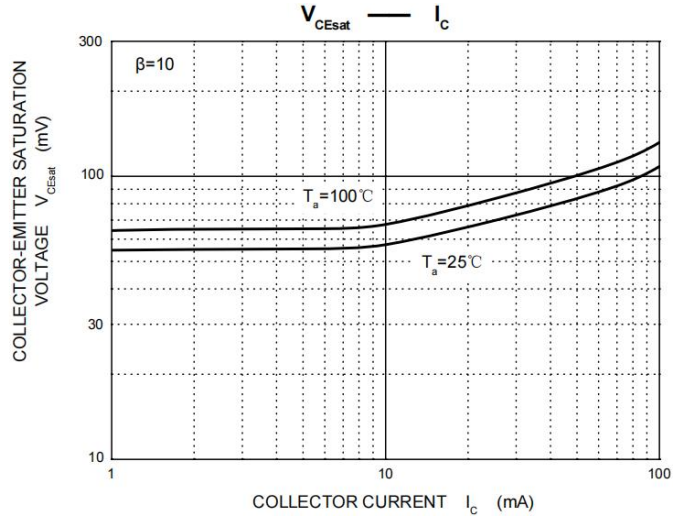
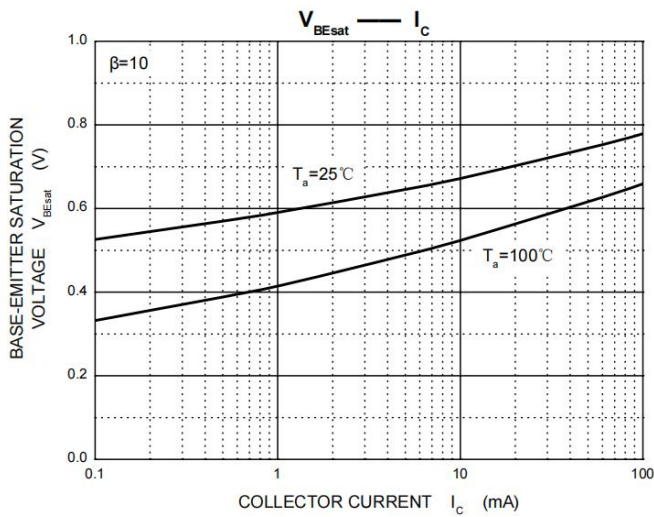
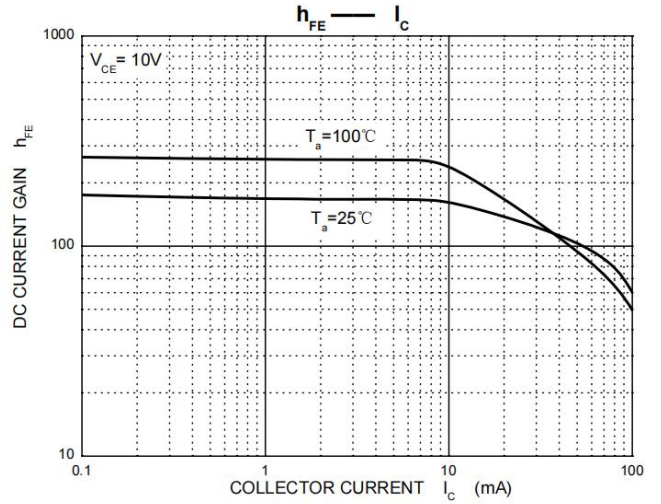
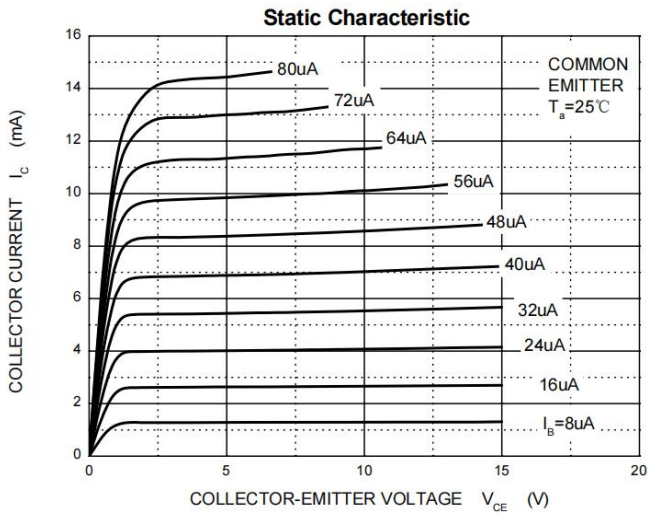
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	200	mA
I_{CM}	Collector Current -Pulsed	300	mA
P_C	Collector Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	350	$^{\circ}C/W$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55~+150	$^{\circ}C$

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

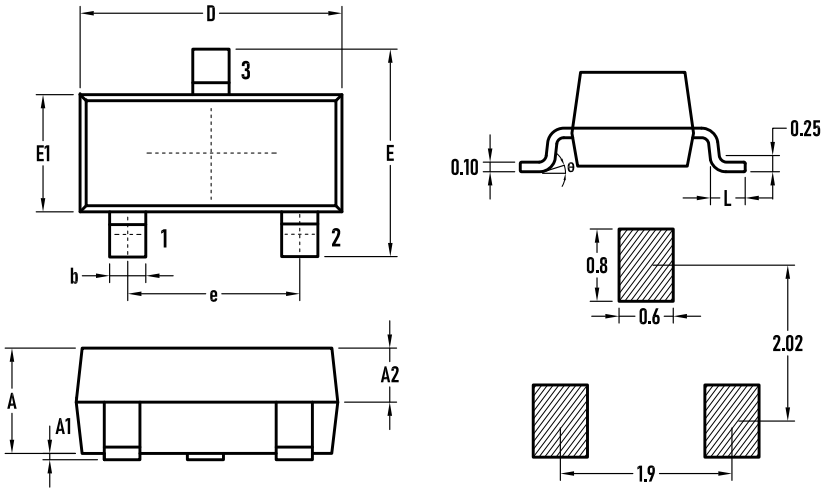
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu\text{A}, I_E=0$	400			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1\text{mA}, I_B=0$	400			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu\text{A}, I_C=0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB}=400\text{V}, I_E=0$			100	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=4\text{V}, I_C=0$			100	nA
$h_{FE(1)}$	DC current gain(1)*	$V_{CE}=10\text{V}, I_C=1\text{mA}$	40			
$h_{FE(2)}$	DC current gain(2)*	$V_{CE}=10\text{V}, I_C=10\text{mA}$	50		200	
$h_{FE(3)}$	DC current gain(3)*	$V_{CE}=10\text{V}, I_C=50\text{mA}$	45			
$h_{FE(4)}$	DC current gain(4)*	$V_{CE}=10\text{V}, I_C=100\text{mA}$	40			
$V_{CE(sat)1}$	Collector-emitter saturation voltage*	$I_C=1\text{mA}, I_B=0.1\text{mA}$			0.4	V
$V_{BE(sat)1}$	Base-emitter saturation voltage*				0.7	V
$V_{CE(sat)2}$	Collector-emitter saturation voltage*	$I_C=10\text{mA}, I_B=1\text{mA}$			0.5	V
$V_{BE(sat)2}$	Base-emitter saturation voltage*				0.75	V
$V_{CE(sat)3}$	Collector-emitter saturation voltage*	$I_C=50\text{mA}, I_B=5\text{mA}$			0.75	V
$V_{BE(sat)3}$	Base-emitter saturation voltage*				1.0	V
f_T	Transition frequency	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=30\text{MHz}$	50			MHz
C_{ob}	Collector output capacitance	$V_{CB}=20\text{V}, I_E=0, f=1\text{MHz}$			7	pF
C_{ib}	Collector output capacitance	$V_{EB}=0.5\text{V}, I_E=0, f=1\text{MHz}$			130	pF

*Pulse test: pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2.0\%$.

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

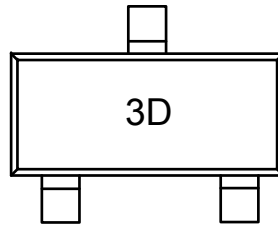


»Package Information-SOT23



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
MMBTA44	SOT-23	3K	Tape and reel

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