

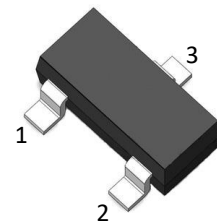
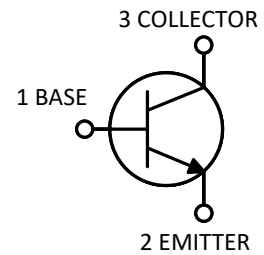
»Features

$V_{CE} @ BC846 = 65V$   
 $V_{CE} @ BC847 = 45V$   
 $V_{CE} @ BC848 = 30V$   
 $I_C = 0.1A$   
 $f_T = 100MHz @ V_{CE}=5V, I_C=10mA, f=30MHz$

»General Description

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

»Pin Configurations



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

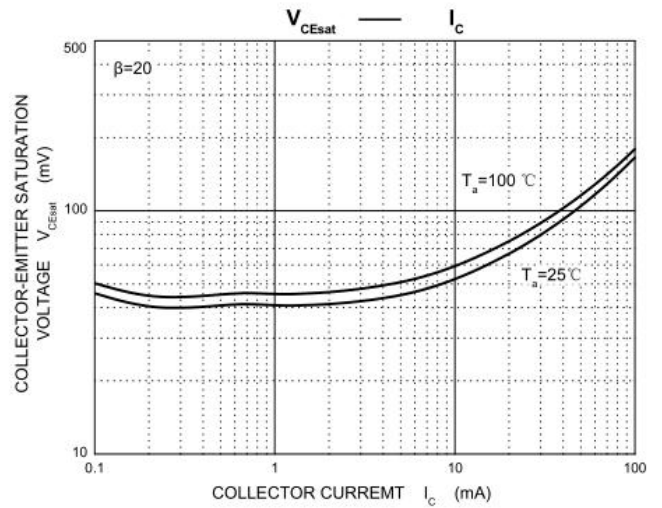
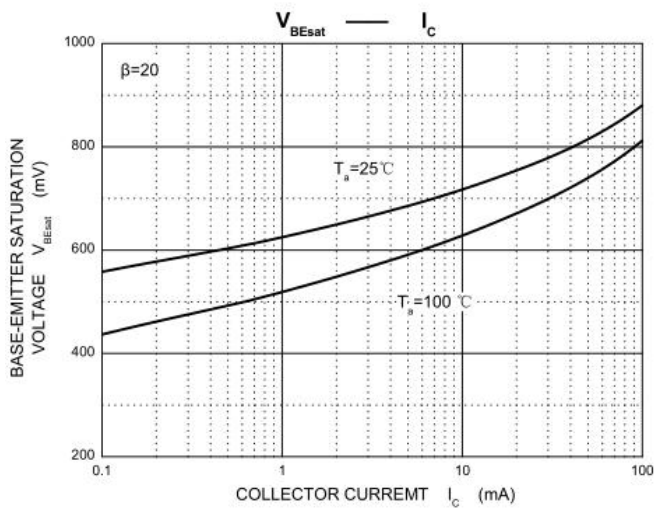
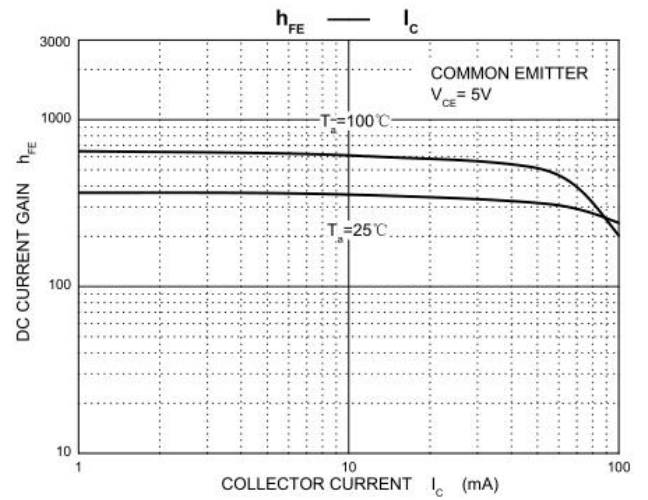
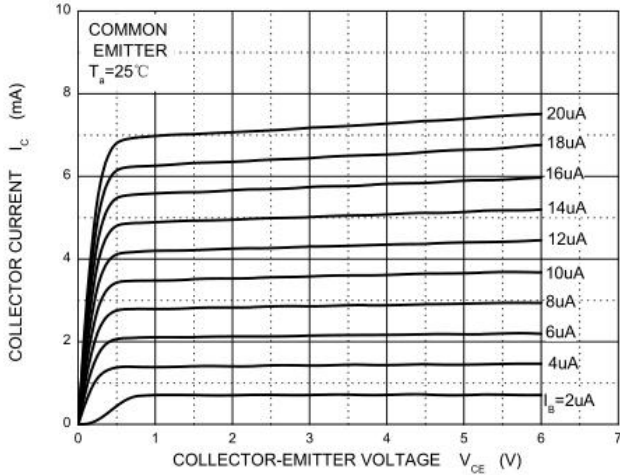
Symbol	Parameter	Part	Value	Unit
$V_{CBO}$	Collector-Base Voltage	BC846 BC847 BC848	80 50 30	V
$V_{CEO}$	Collector-Emitter Voltage	BC846 BC847 BC848	65 45 30	V
$V_{EBO}$	Emitter-Base Voltage		6	V
$I_C$	Collector Current		100	mA
$P_C$	Collector Power Dissipation		200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient		625	$^{\circ}C/W$
$T_J, T_{stg}$	Operation Junction And Storage Temperature Range		-55~+150	$^{\circ}C$

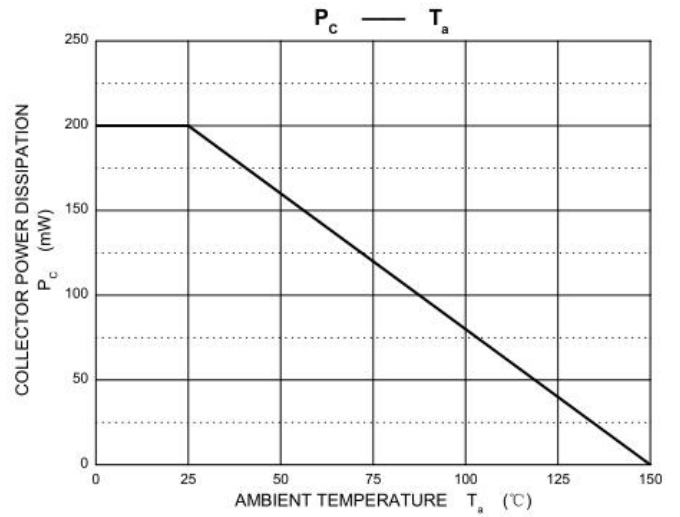
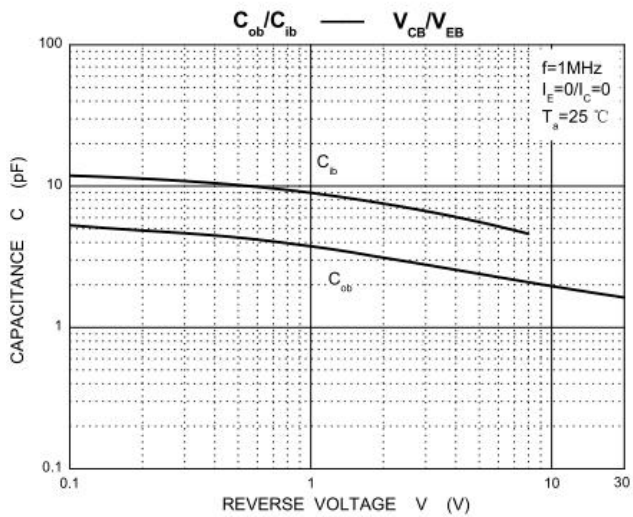
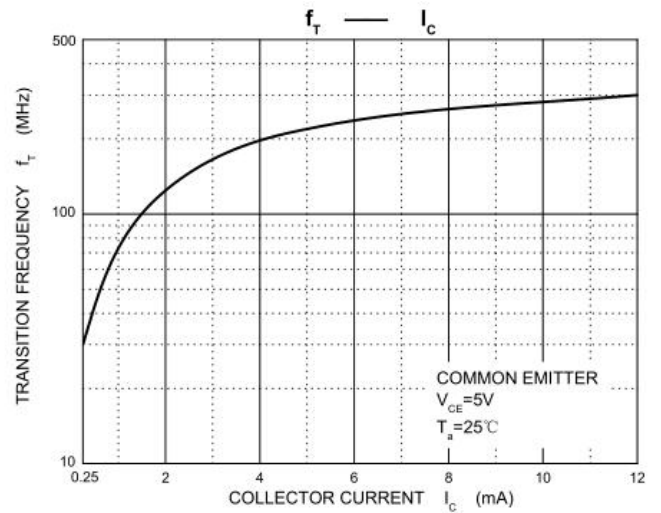
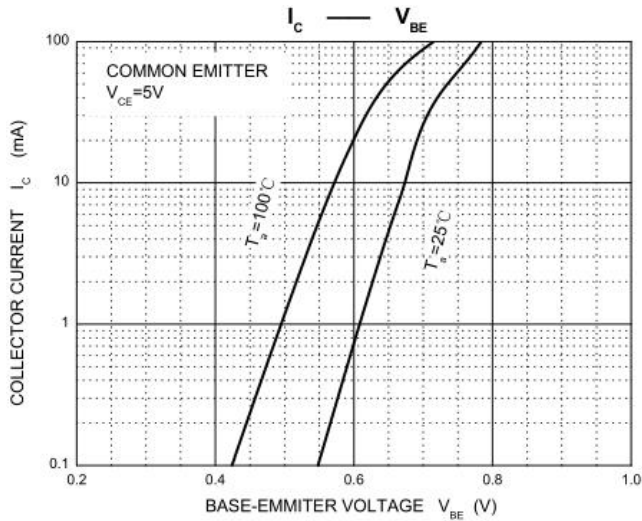
**»Electrical Characteristics** @ $T_A=25^{\circ}\text{C}$  unless otherwise noted

Symbol	Parameter	Partnumber	Test conditions	Min	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	BC846 BC847 BC848	$I_C=10\mu\text{A}, I_E=0$	80 50 30		V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	BC846 BC847 BC848	$I_C=10\text{mA}, I_B=0$	65 45 30		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	BC846 BC847 BC848	$V_{CB}=70\text{V}, I_E=0$ $V_{CB}=50\text{V}, I_E=0$ $V_{CB}=30\text{V}, I_E=0$		100	nA
$I_{EBO}$	Emitter cut-off current		$V_{EB}=5\text{V}, I_C=0$		100	nA
$h_{FE}$	DC current gain	BC846A BC847A BC848A BC846B BC847B BC848B BC846C BC847C BC848C	$V_{CE}=5\text{V}, I_C=2\text{mA}$	110 200 420	220 450 800	
$V_{CE(sat)}$	Collector-emitter saturation voltage		$I_C=100\text{mA}, I_B=5\text{mA}$		0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage				1.1	V
$f_T$	Transition frequency		$V_{CE}=5\text{V}, I_C=10\text{mA},$ $f=30\text{MHz}$	100		MHz
Cob	Collector output capacitance		$V_{CB}=10\text{V}, f=1\text{MHz}$		4.5	pF

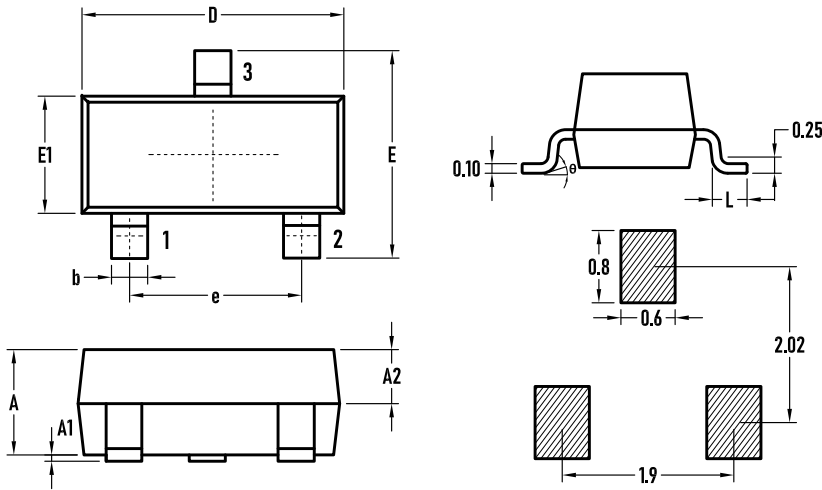
»Typical Performance Characteristics ((T<sub>J</sub> = 25 °C, unless otherwise noted))

Static Characteristic



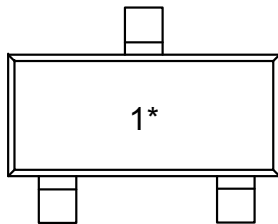


»Package Information-SOT23



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



BC846A=1A BC846B=1B BC846C=1C  
 BC847A=1E BC847B=1F BC847C=1G  
 BC848A=1J BC848B=1K BC848C=1L

»Ordering information

Order code	Package	Base qty	Delivery mode
BC846 BC847 BC848	SOT-23	3K	Tape and reel