General Purpose NPN Silicon Transistors

Features

- ✧ High hFE: 110~800
- ✧ NPN switch transistor
- ✧ Power Dissipation of 200mW
- ✧ Low Cob

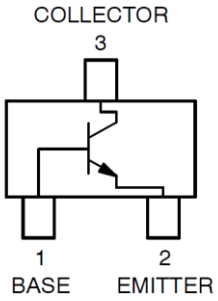
V_{CBO}	50V
I_C	100mA
f_T	100M (Min.)

Applications

- ✧ Ideally suited for automatic insertion
- ✧ For switching and AF amplifier applications
- ✧ Surface Mount device

Mechanical Data

- ✧ UL Flame Rating : UL94V-0
- ✧ Reel Size : 7 inch
- ✧ RoHS/WEEE Compliant



Circuit Diagram


SOT-23

Absolute Maximum Rating (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	45	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current DC	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	R_{eJA}	625	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

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Electronics Characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbols	Test Condition		Limits		Unit
				Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10uA, I_E=0		50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA, I_B=0		45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10uA, I_C=0		6		V
Collector cut-off current	I_{CBO}	V_{CB}=50V, I_E=0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0			0.1	uA
DC current gain	$h_{FE(1)}$	V_{CE}=5V, I_C=2mA	OVS847AST3R	110	220	
	$h_{FE(2)}$	V_{CE}=5V, I_C=2mA	OVS847BST3R	200	450	
	$h_{FE(3)}$	V_{CE}=5V, I_C=2mA	OVS847CST3R	420	800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B=5mA			0.50	V
Base -emitter saturation voltage	$V_{BE(sat)}$	I_C=100mA, I_B=5mA			1.10	V
Transition frequency	f_T	V_{CE}=5V, I_C=10mA,f=100MHz		100		MHz
Collector output capacitance	Cob	V_{CB}=10V, I_E=0、f=1MHz			4.5	pF

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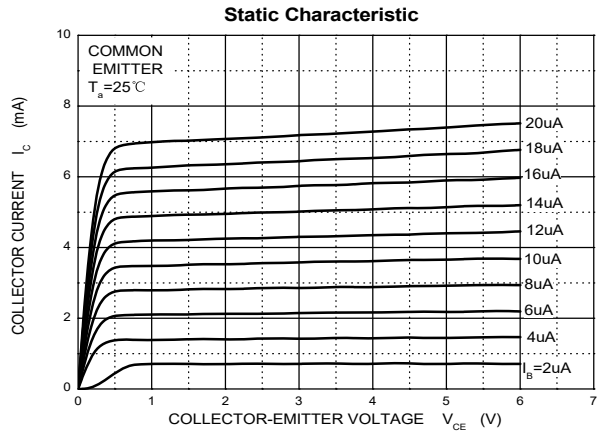
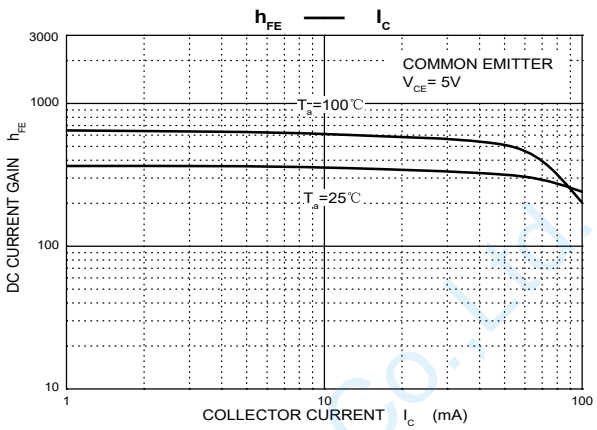
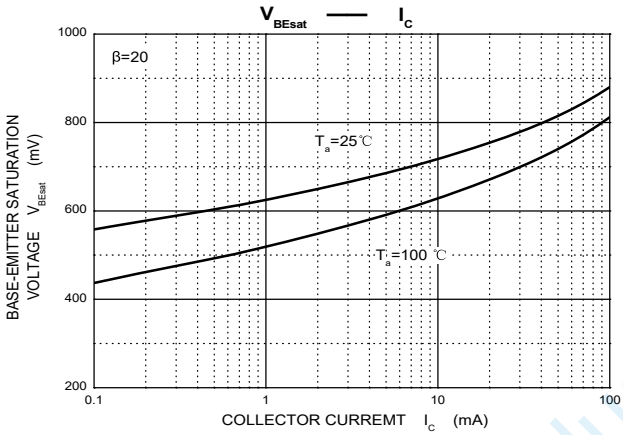
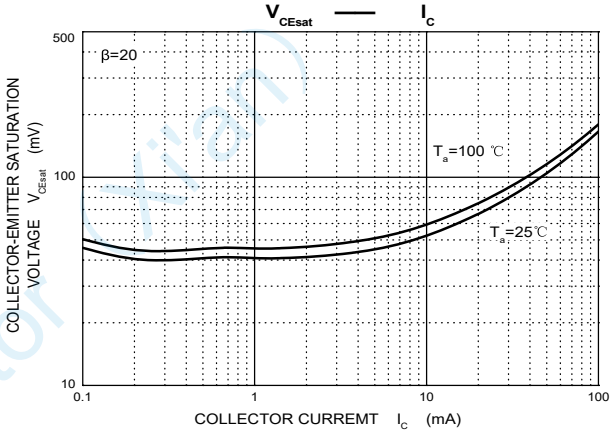
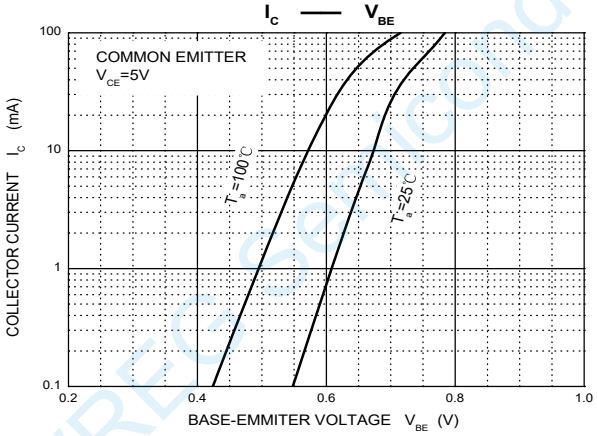
Electronics Characteristics (Ta=25°C, unless otherwise noted)

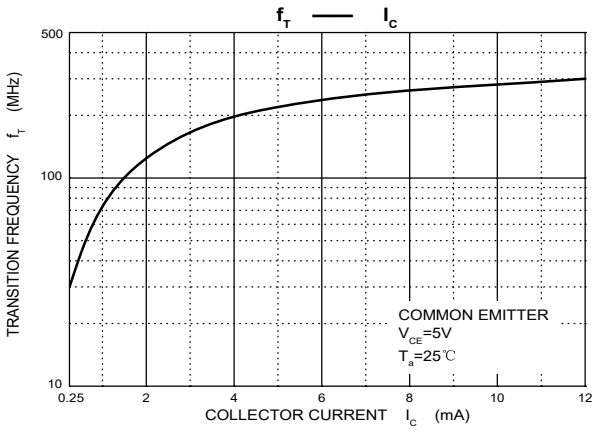


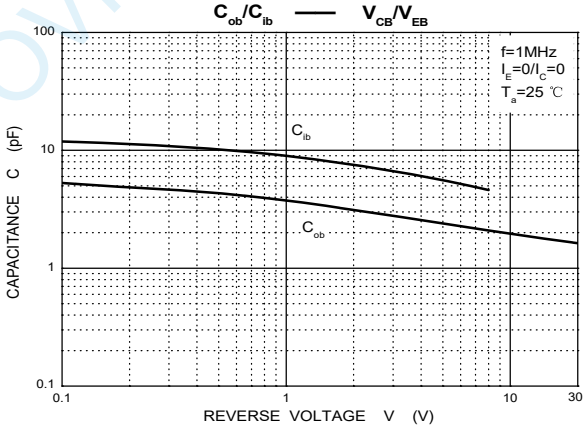


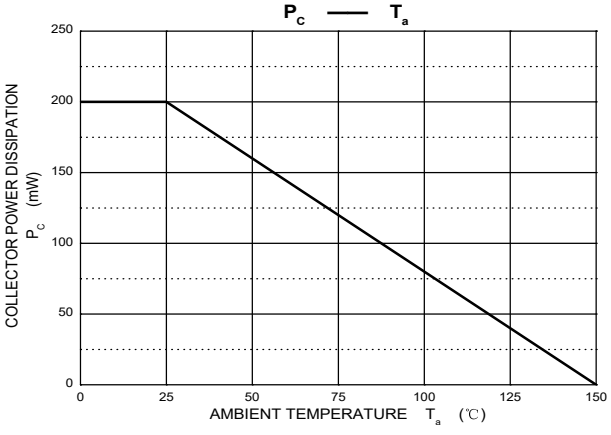












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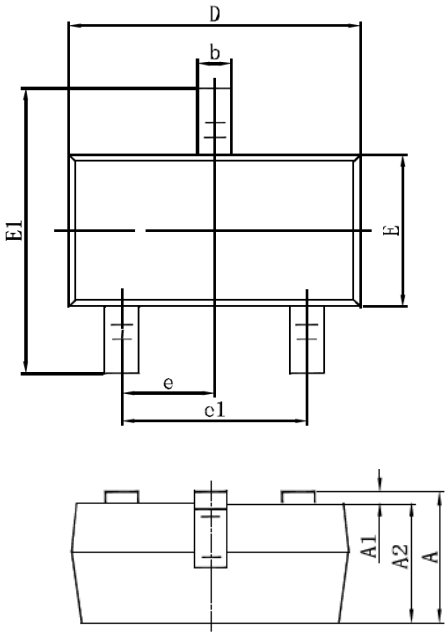
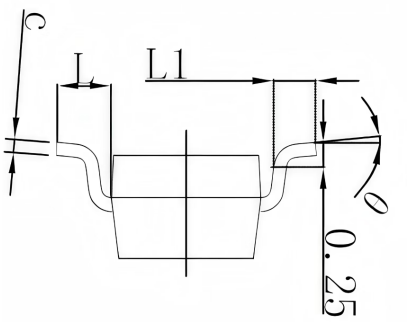
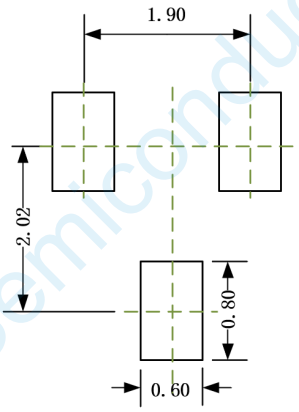
Package Information





Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950 TYP	
e1	1.800	2.000
L	0.550 REF	
L1	0.300	0.500
θ	0°	8°

Recommend PCB Layout



Note:

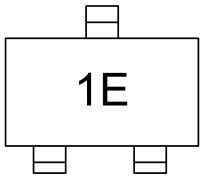
1.Controlling dimension: in millimeters

2.General tolerance: ±0.05mm

3.The pad layout is for reference purposes only

Marking

OVS847AST3R:



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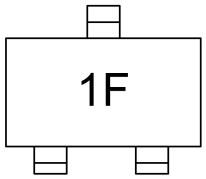

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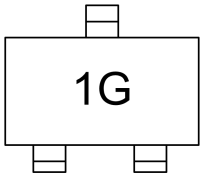

Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVS847xST3R Series	GREEN	T/R	7 inch	3k/reel	10reel= 30k/box	4boxes=120k/carton

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