

Ultra-Small package switch transistor

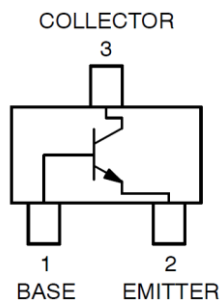
Features

- ✧ High hFE 400
- ✧ Low $V_{CE(sat)}$, < 0.4 V
- ✧ NPN switch transistor
- ✧ Low Cob

V_{CBO}	50V
I_C	100mA
$V_{CE(sat)}$	0.4V (Max.)
f_T	200M (Typ.)

Applications

- ✧ Switching Applications



Circuit Diagram

Mechanical Data

- ✧ UL Flame Rating : UL94V-0
- ✧ Package: SOT-723
- ✧ RoHS/WEEE Compliant



SOT-723

Absolute Maximum Rating ($T_a=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	50	V
Collector to Emitter Voltage	V_{CEO}	50	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current DC	I_C	100	mA
Collector Power Dissipation	P_D	260	mW
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V_{CBO}	$I_C=50\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=1m A, I_B=0$	50			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=50\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$		0.1		μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$		0.1		μA
DC current gain	h_{FE}	$V_{CE}=6V, I_C=1mA$	200		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$			0.4	V
Transition frequency	f_T	$V_{CE}=12V, I_C=2mA,$ $f=30MHz$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB}=12V, I_E=0mA,$ $f=1MHz$		2.0		pF

Electronics Characteristics ($T_A=25^\circ\text{C}$, unless otherwise noted)

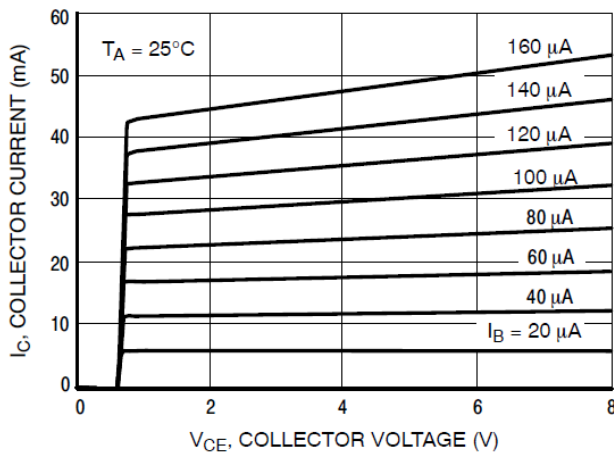


Figure 1. $I_C - V_{CE}$

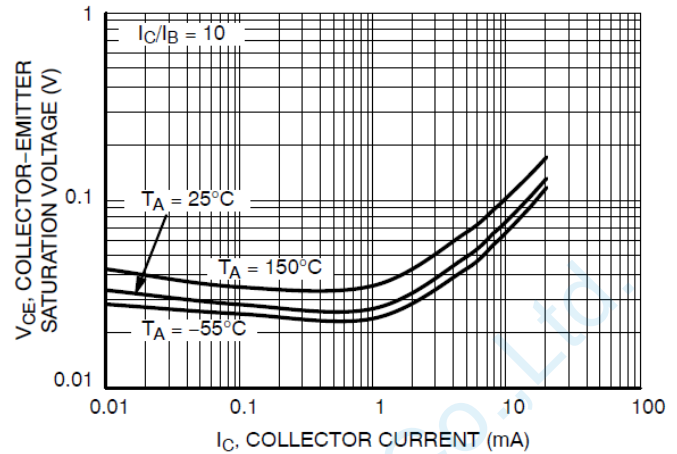


Figure 2. Collector Emitter Saturation Voltage vs. Collector Current

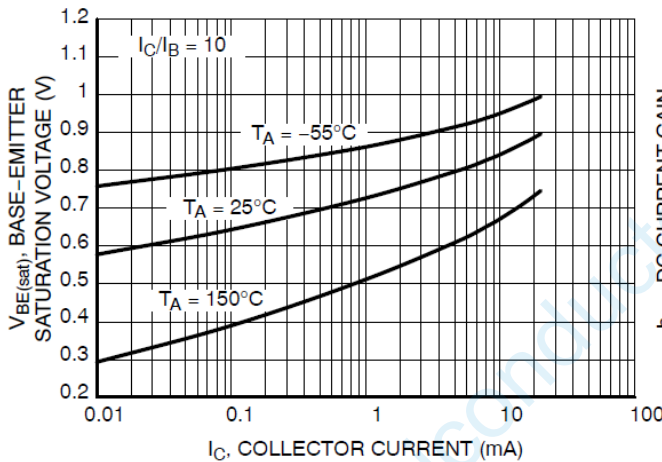


Figure 3. Base Emitter Saturation Voltage vs. Collector Current

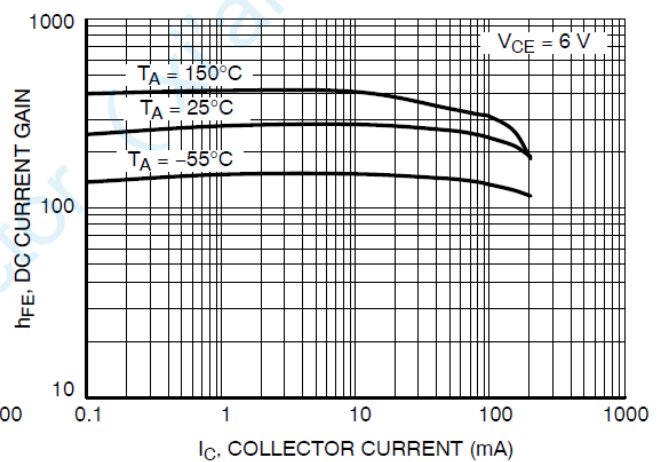


Figure 4. DC Current Gain vs. Collector Current

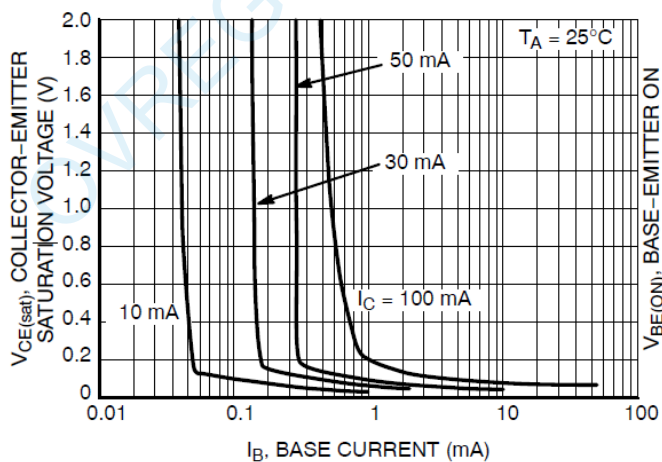


Figure 5. Saturation Region

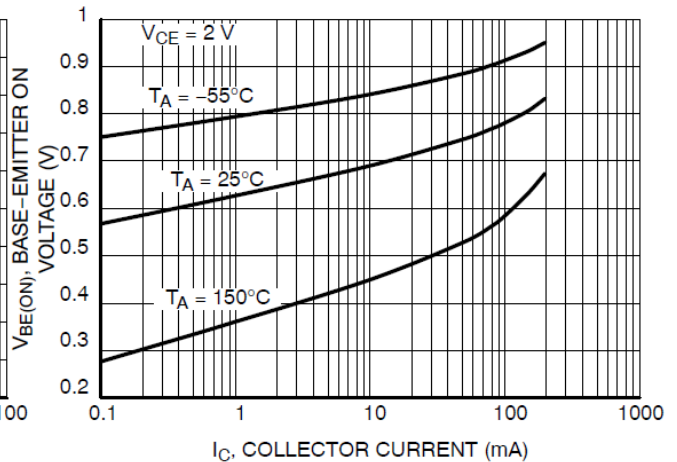
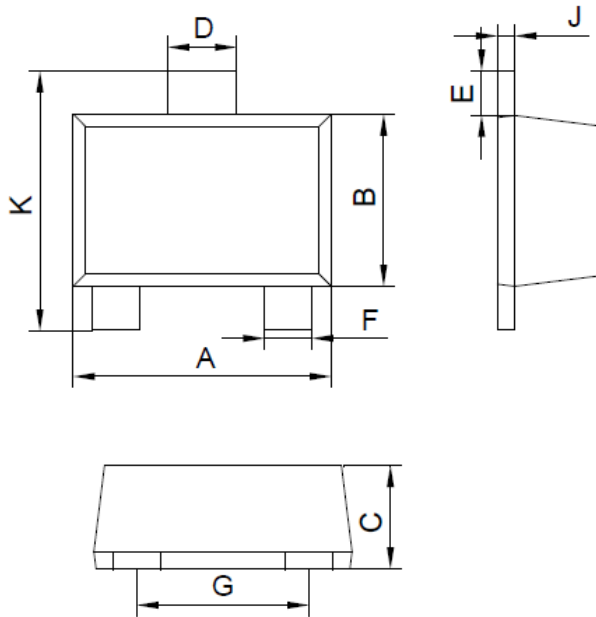


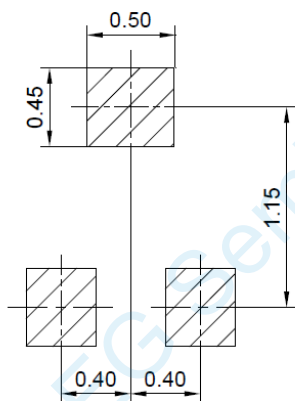
Figure 6. Base-Emitter Turn-ON Voltage vs. Collector Current

Package information



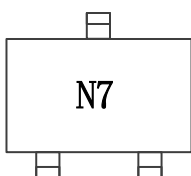
SOT-723		
Dim	Min	Max
A	1.10	1.30
B	0.70	0.90
C	0.40	0.54
D	0.22	0.42
E	0.10	0.30
F	0.12	0.32
G	0.70	0.90
J	0.08	0.15
K	1.10	1.30
All Dimensions in mm		

Recommend PCB Layout



Unit : mm

Marking



Ordering Information

Part number	Material	Type	Reel size	MOQ
OVS5632T7R	GREEN	T/R	7 inch	10k/reel