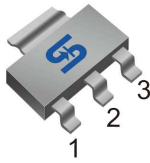


High Voltage PNP Epitaxial Planar Transistor

SOT-223

Pin Definition:

1. Base
2. Collector
3. Emitter

PRODUCT SUMMARY

BV_{CBO}	-560V
BV_{CEO}	-560V
I_C	-150mA
V_{CE(SAT)}	-0.5V @ I _C =-50mA, I _B =-10mA

Features

- Low Saturation Voltages
- High Breakdown Voltage

Structure

- Epitaxial Planar Type
- PNP Silicon Transistor

Ordering Information

Part No.	Package	Packing
TSA1765CW RP	SOT-223	2.5Kpcs / 13" Reel

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

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V _{CBO}	-560	V
Collector-Emitter Voltage	V _{CEO}	-560	V
Emitter-Base Voltage	V _{EBO}	-7	V
Collector Current	I _C	-150	mA
Collector Current(Pulse)	I _{CP}	-500	
Base Current	I _B	-50	
Total Power Dissipation @ T _C =25°C	P _{tot}	2	W
Operating Junction Temperature	T _J	+150	°C
Operating Junction and Storage Temperature Range	T _{STG}	- 55 to +150	°C

Electrical Specifications (Ta = 25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	I _C = -1mA, I _E = 0	BV _{CBO}	-560	--	--	V
Collector-Emitter Breakdown Voltage	I _C = -1mA, I _B = 0	BV _{CEO}	-560	--	--	V
Emitter-Base Breakdown Voltage	I _E = -10uA, I _C = 0	BV _{EBO}	-7	--	--	V
Collector Cutoff Current	V _{CB} = -560V, I _E = 0	I _{CBO}	--	--	-100	nA
Emitter Cutoff Current	V _{EB} = -7V, I _C = 0	I _{EBO}	--	--	-100	nA
Collector-Emitter Saturation Voltage	I _C = -20mA, I _B = -2mA	V _{CE(SAT)} 1	--	--	-0.2	V
	I _C = -50mA, I _B = -10mA	V _{CE(SAT)} 2	--	--	-0.5	
Base-Emitter Saturation Voltage	I _C = -50mA, I _B = -10mA	V _{BE(SAT)} 1	--	--	-1.0	V
Base-Emitter on Voltage	V _{CE} = -10V, I _C = -50mA	V _{BE(ON)}	--	--	-1.0	V
DC Current Transfer Ratio	V _{CE} = -10V, I _C = -1mA	h _{FE} 1	150	--	--	
	V _{CE} = -10V, I _C = -50mA	h _{FE} 2	80	--	300	
	V _{CE} = -10V, I _C = -100mA	h _{FE} 3	--	15	--	
Transition Frequency	V _{CE} = -20V, I _E =-10mA	f _T	50	--	--	MHz
Output Capacitance	V _{CB} = -20V, f=1MHz	Cob	--	--	8	pF

Electrical Characteristics Curve ($T_a = 25^\circ\text{C}$, unless otherwise noted)

Figure 1. Static Characteristics

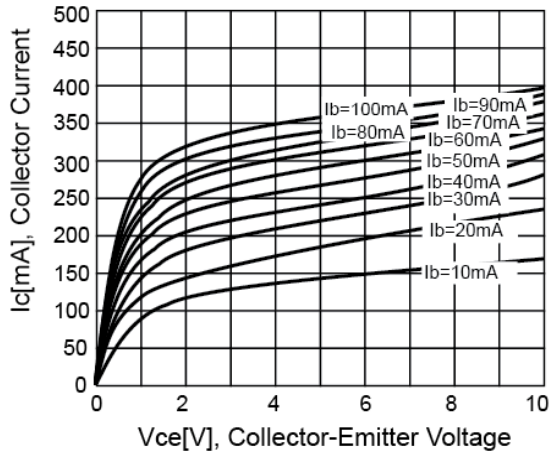


Figure 2. DC Current Gain

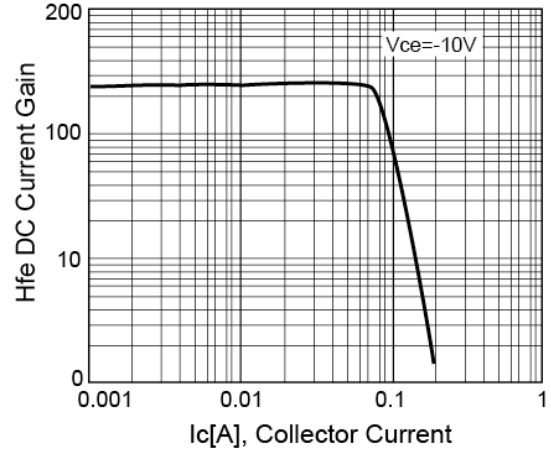


Figure 3. $V_{ce(sat)}$ v.s. $V_{be(sat)}$

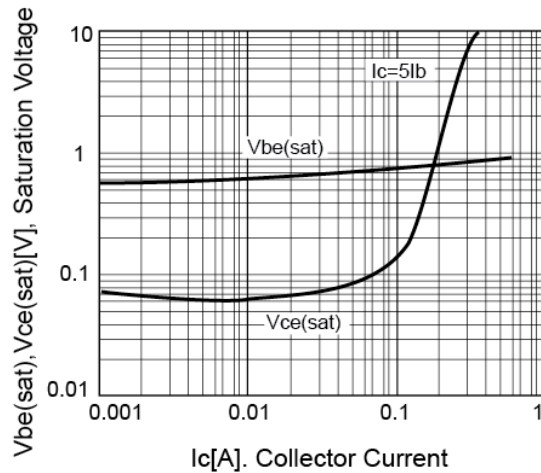


Figure 4. Power Derating

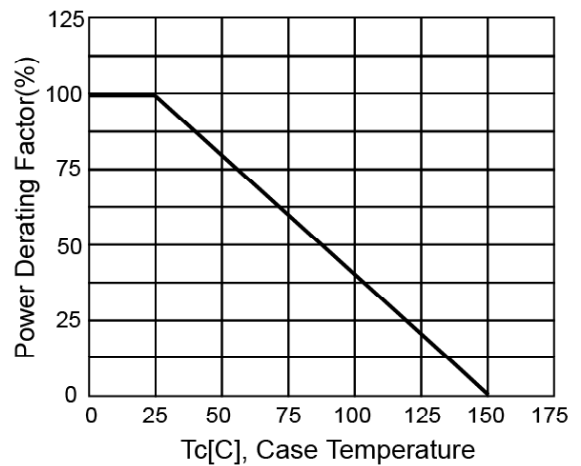
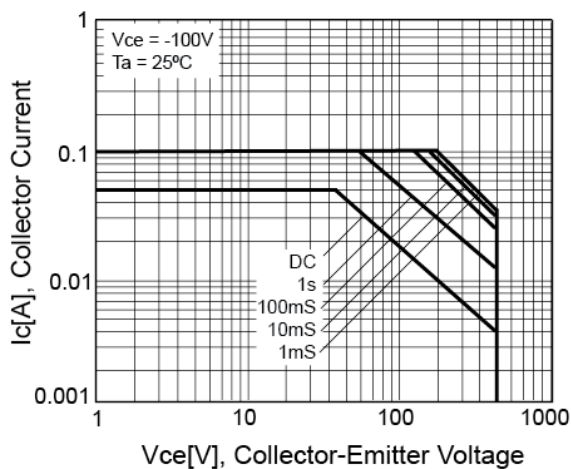
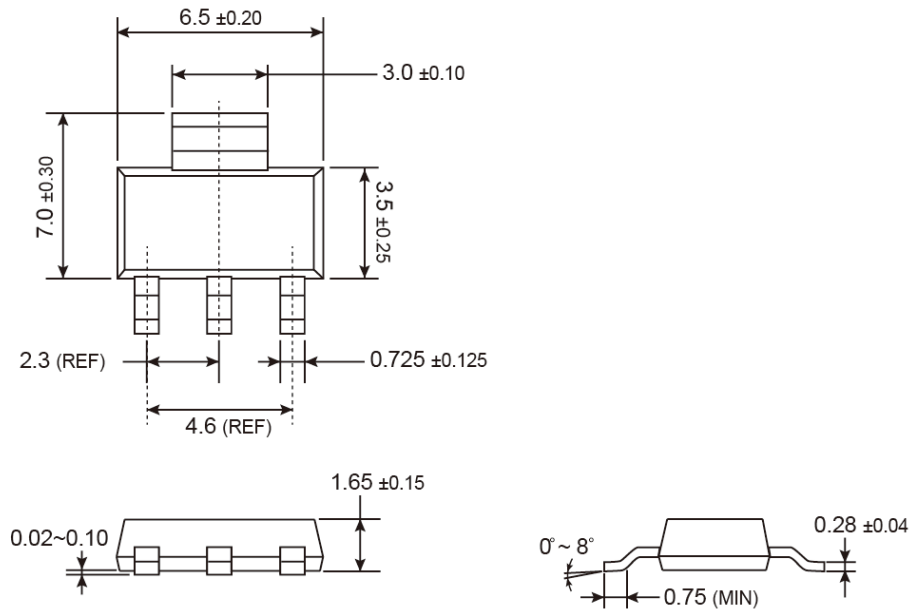


Figure 5. Safety Operation Area

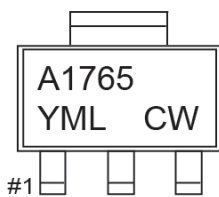


SOT-223 Mechanical Drawing



Unit: Millimeters

Marking Diagram



Y = Year Code

M = Month Code

(**A**=Jan, **B**=Feb, **C**=Mar, **D**=Apr, **E**=May, **F**=Jun, **G**=Jul, **H**=Aug, **I**=Sep, **J**=Oct, **K**=Nov, **L**=Dec)

L = Lot Code

TSA1765

High Voltage PNP Epitaxial Planar Transistor

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