

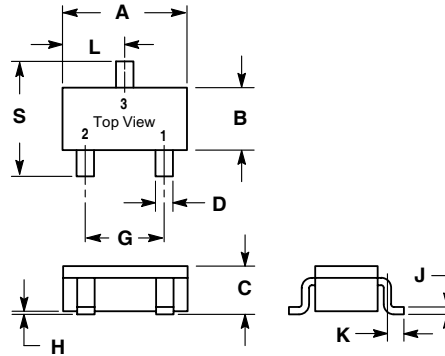
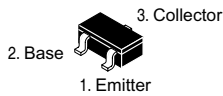
RoHS Compliant Product

FEATURES

- High Collector Current
- Low $V_{CE(sat)} - V_{CE(sat)} \leq -250\text{mV}$ at $I_C = -200\text{mA}/I_B = -10\text{mA}$

MARKING CODE

BW



SOT-523		
Dim	Min	Max
A	1.50	1.70
B	0.78	0.82
C	0.80	0.82
D	0.28	0.32
G	0.90	1.10
H	0.00	0.10
J	0.10	0.20
K	0.35	0.41
L	0.49	0.51
S	1.50	1.70
All Dimension in mm		

Maximum Ratings ($T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	-15	V
Collector-emitter voltage	V_{CE0}	-12	V
Emitter-base voltage	V_{EB0}	-6	V
Collector current (Continuous)	I_C	-0.5	A
Collector power dissipation	P_C	0.15	W
Junction temperature	T_j	-55~+150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~+150	$^\circ\text{C}$

Electrical Characteristics ($T_{amb} = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	-15			V	$I_C = -10\ \mu\text{A}, I_E = 0$
Collector-emitter breakdown voltage	BV_{CE0}	-12			V	$I_C = -1\text{mA}, I_B = 0$
Emitter-base breakdown voltage	BV_{EB0}	-6			V	$I_E = -10\ \mu\text{A}, I_C = 0$
Collector cutoff current	I_{CB0}			-0.1	μA	$V_{CB} = -15\text{V}, I_E = 0$
Emitter cutoff current	I_{EB0}			-0.1	μA	$V_{EB} = -6\text{V}, I_C = 0$
DC current gain	h_{FE}	270		680		$V_{CE} = -2\text{V}, I_C = -10\text{mA}$
Collector-emitter saturation voltage	$V_{CE(sat)}$			-0.25	V	$I_C = -200\text{mA}, I_B = -10\text{mA}$
Transition frequency	f_T		260		MHz	$V_{CE} = -2\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$
Collector Output capacitance	C_{ob}		6.5		pF	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$

● Electrical Characteristic Curves

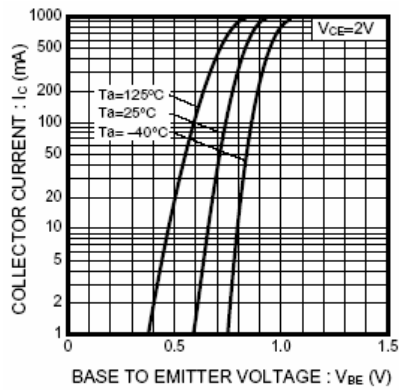


Fig.1 Grounded Emitter Propagation Characteristics

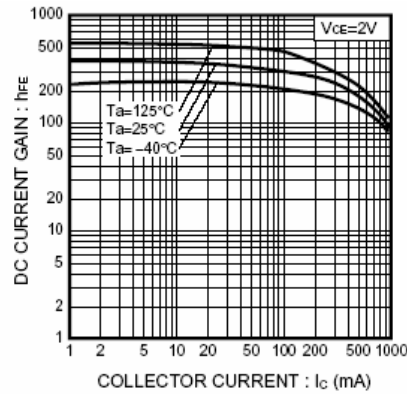


Fig.2 DC Current Gain vs. Collector Current

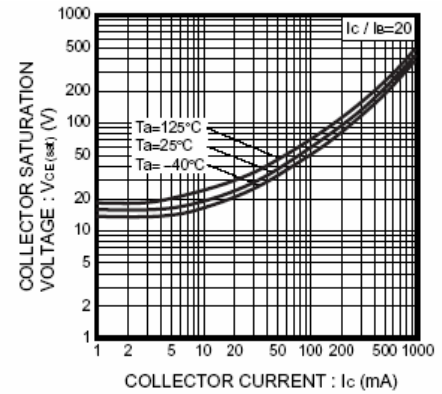


Fig.3 Collector-Emitter Saturation Voltage vs. Collector Current (I)

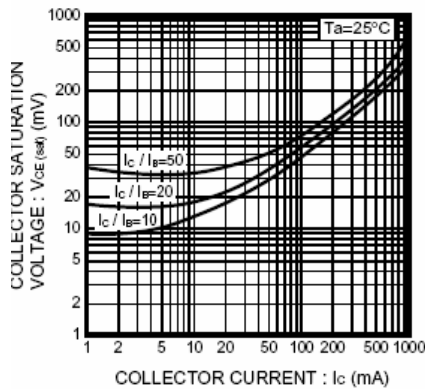


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current (II)

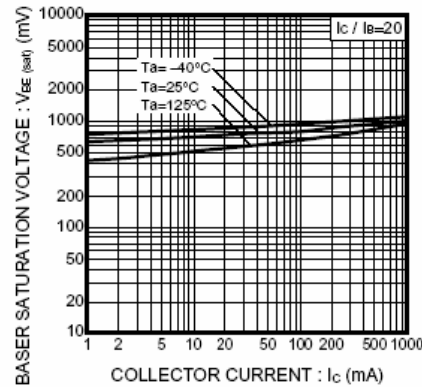


Fig.5 Base-Emitter Saturation Voltage vs. Collector Current

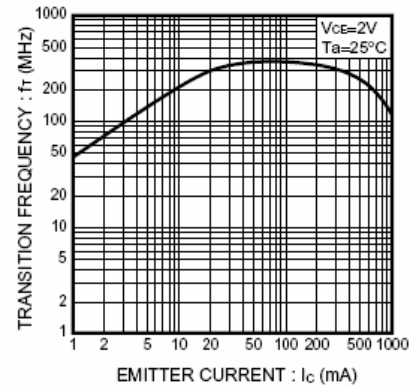


Fig.6 Gain Bandwidth Product vs. Emitter Current

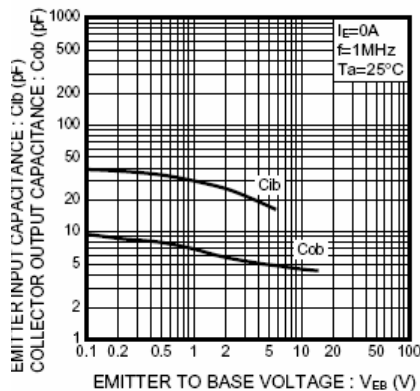


Fig.7 Collector Output Capacitance vs. Collector-Base Voltage
Emitter Input Capacitance vs. Emitter-Base Voltage