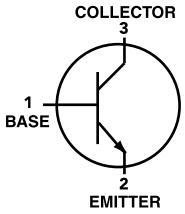
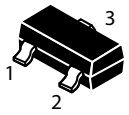
WEITRON

2SC1623

NPN General Purpose Transistors

Lead(Pb)-Free





SOT-23

MAXIMUM RATINGS(Ta=25°C)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	50	V
Collector-Base Voltage	V_{CBO}	60	V
Emitter-Base Voltage	V_{EBO}	7	V
Collector Current - Continuous	I_C	150	mA
Total Device Dissipation FR-5 Board T_A=25°C Derate above 25°C	P_D	 225 1.8	 mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate, TA=25°C Derate above 25°C	P_D	 300 2.4	 mW mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	T_j	-55 to+150	°C
Storage Temperature	T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector Cutoff Current V_{CB} = 60V, I_E = 0	I_{CBO}	-	-	0.1	μA
Emitter Cutoff Current V_{EB} = 5V, I_C = 0	I_{EBO}	-	-	0.1	μA
ON CHARACTERISTICS					
Collector-Emitter Saturation Voltage I_C = 100mA, I_B = 10mA	$V_{CE(sat)}$	-	0.15	0.3	V
Base-Emitter Saturation Voltage I_C = 100mA, I_B = 10mA	$V_{BE(sat)}$	-	0.86	1.0	V
Base-Emitter On Voltage I_C = 1mA,V_{CE}=6.0V	V_{BE}	0.55	0.62	0.65	V
DC Current Transfer Ration V_{CE} = 6V, I_C = 1mA	h_{FE}	120	-	560	
SMALL-SIGNAL CHARACTERISTICS					
Transition frequence V_{CE} = 6V, I_C =10mA	f_T	-	250	-	MHz
Output Capacitance(V_{CE} = 6V, I_E=0, f=1.0MHz)	C_{ob}	-	3	-	Pf

CLASSIFICATION h_{FE}

Rank	Q	R	S
Range	120-270	180-390	270-560
Marking	L5	L6	L7

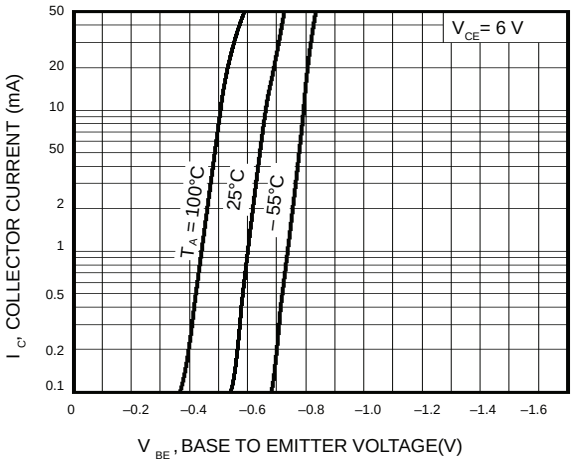


Fig.1 Grounded emitter propagation characteristics

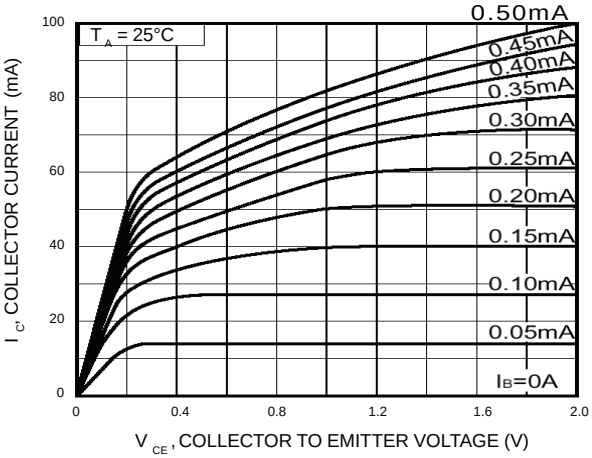


Fig.2 Grounded emitter output characteristics(Ⅰ)

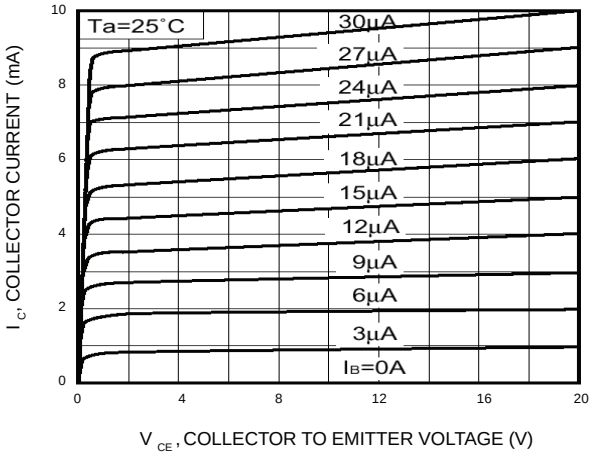


Fig.3 Grounded emitter output characteristics(Ⅱ)

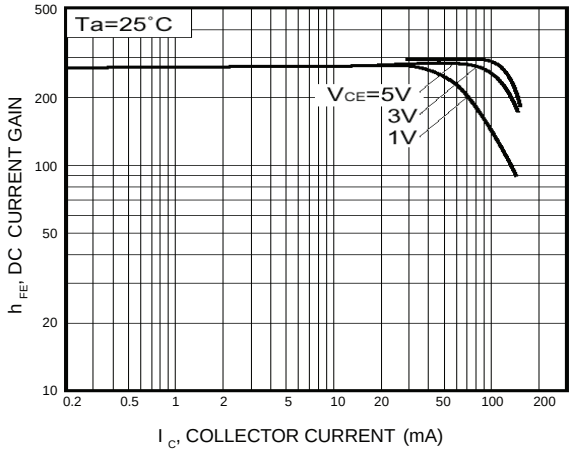


Fig.4 DC current gain vs. collector current (Ⅰ)

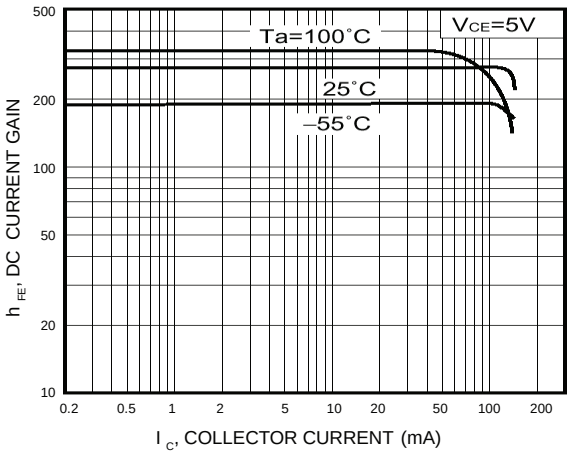


Fig.5 DC current gain vs. collector current (Ⅱ)

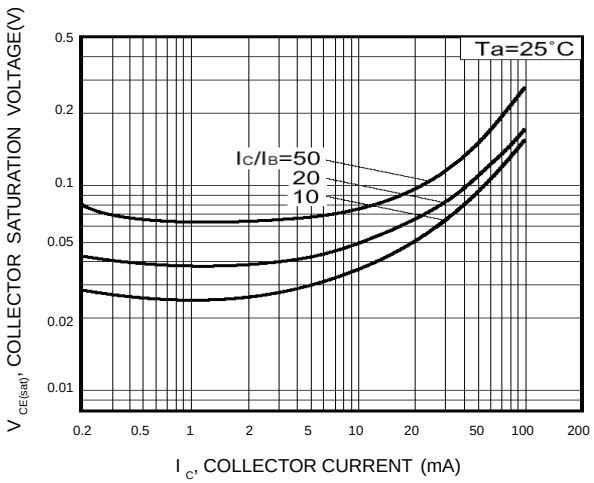


Fig.6 Collector-emitter saturation voltage vs. collector current

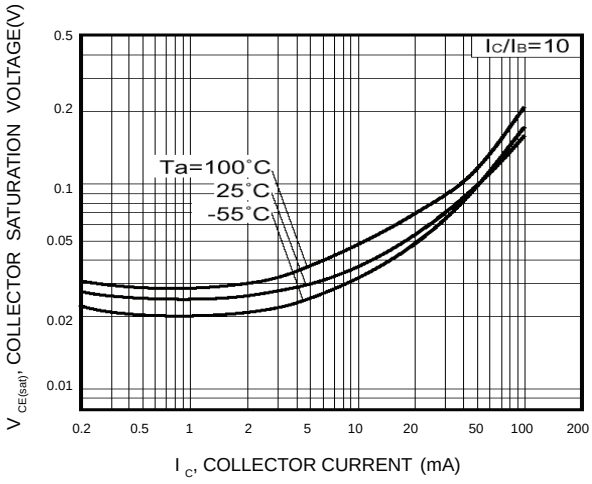


Fig.7 Collector-emitter saturation voltage vs. collector current (Ⅰ)

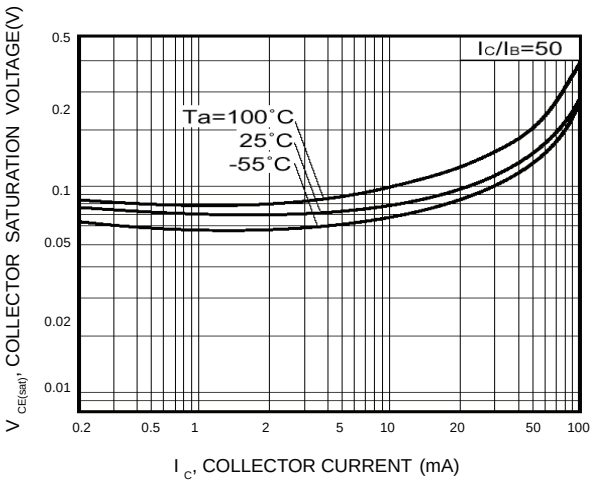


Fig.8 Collector-emitter saturation voltage vs. collector current (Ⅱ)

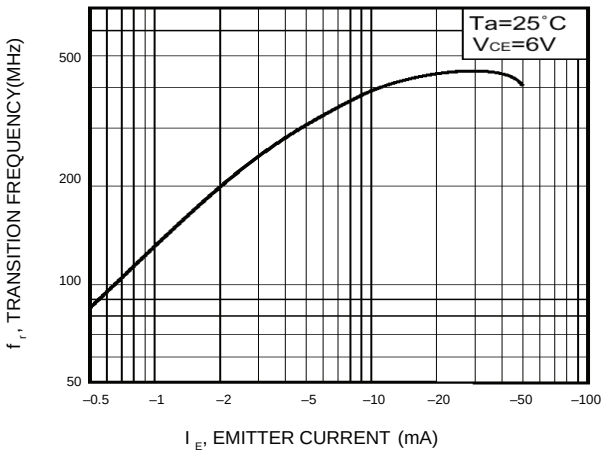


Fig.9 Gain bandwidth product vs. emitter current

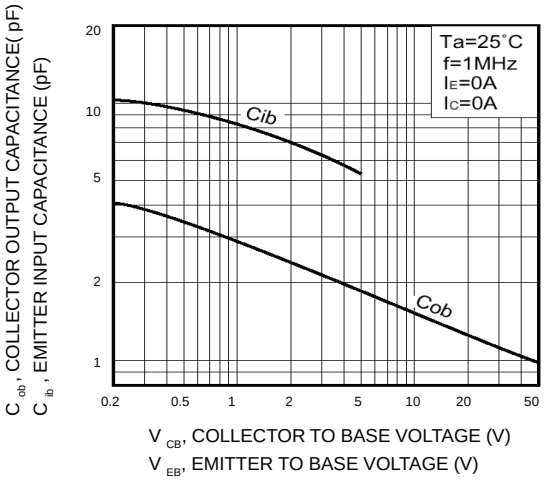


Fig.10 Collector output capacitance vs.collector-base voltage Emitter inputcapacitance vs. emitter-base voltage

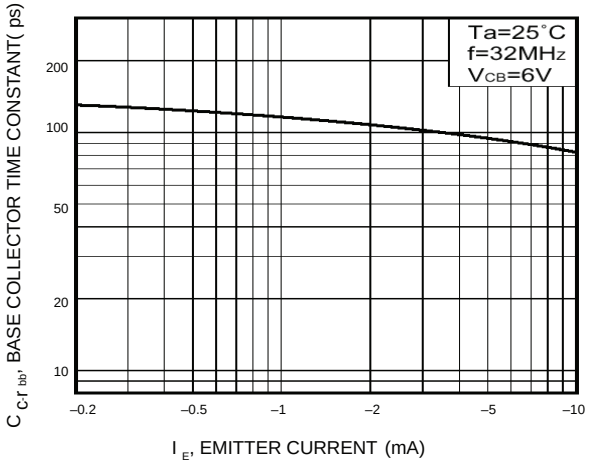
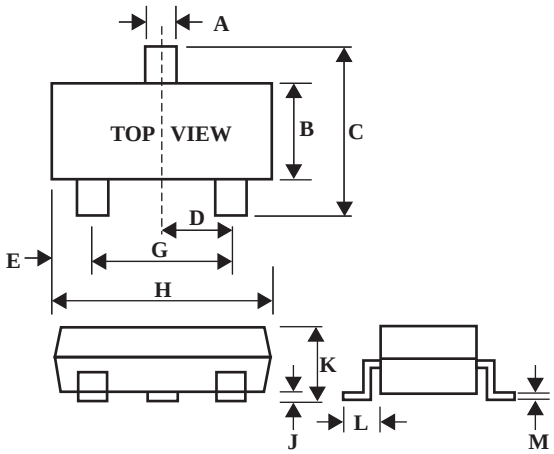


Fig.11 Base-collector time constant vs.emitter current

SOT-23 Outline Dimension



SOT-23		
Dim	**Min**	**Max**
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25