

We declare that the material of product compliance with RoHS requirements.

Pb-Free package is available

RoHS product for packing code suffix "G"

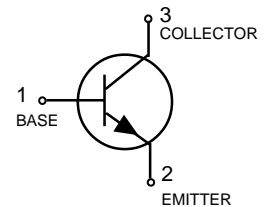
Halogen free product for packing code suffix "H"

Moisture Sensitivity Level 1



MAXIMUM RATINGS

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-continuoun	I_C	150	mAdc



THERMAL CHARATEERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, (1) $T_A=25^\circ\text{C}$	P_D	225	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate, (2) $T_A=25^\circ\text{C}$	P_D	300	mW
Derate above 25°C		2.4	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

DEVICE MARKING

2SC1623QLT1=L5	2SC1623RLT1=L6	2SC1623SLT1=L7
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ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
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OFF CHARACTERISTICS

Collector Cutoff Current ($V_{CB}=60\text{V}$)	I_{CBO}	-	-	0.1	μA
Emitter Cutoff Current ($V_{BE}=5\text{V}$)	I_{EBO}			0.1	μA

ON CHARACTERISTICS

DC Current Gain ($I_C=1.0\text{mA}$, $V_{CE}=6\text{V}$)	h_{FE}	120	-	560	
Collector-Emitter Saturation Voltage ($I_C=100\text{mA}$, $I_B=10\text{mA}$)	$V_{CE(sat)}$	-	0.15	0.3	V
Base-Emitter Saturation Voltage ($I_C=100\text{mA}$, $I_B=10\text{mA}$)	$V_{BE(sat)}$	-	0.86	1.0	V
Base -Emitter On Voltage $I_C=1\text{mA}$, $V_{CE}=6.0\text{V}$)	V_{BE}	0.55	0.62	0.65	V

SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product ($V_{CE}=6.0\text{V}$, $I_E=1.0\text{MHz}$)	F_t	-	250	-	MHz
Output Capacitance($V_{CE}=6\text{V}$, $I_E=0$, $f=1.0\text{MHz}$)	C_{ob}	-	3	-	Pf

h_{FE} Values are classified as follows

NOTE:

*	Q	R	S
h_{FE}	120~270	180~390	270~560

DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
2SC1623QLT1	L5	3000/Tape&Reel
2SC1623RLT1	L6	3000/Tape&Reel
2SC1623SLT1	L7	3000/Tape&Reel

Fig.1 Grounded emitter propagation characteristics

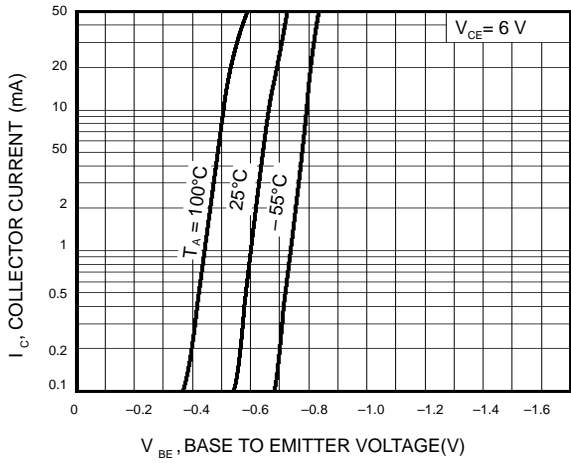


Fig.2 Grounded emitter output characteristics(I)

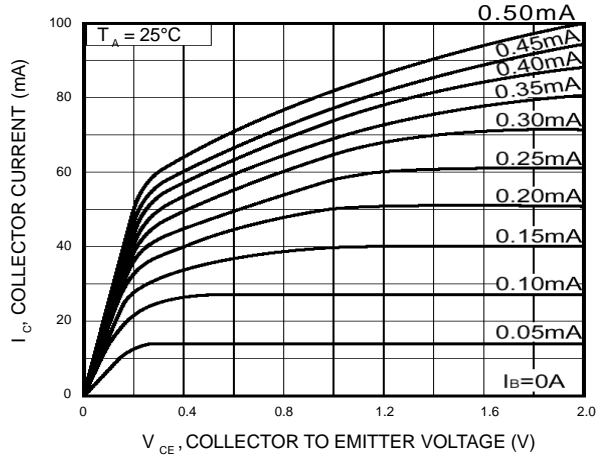


Fig.3 Grounded emitter output characteristics(II)

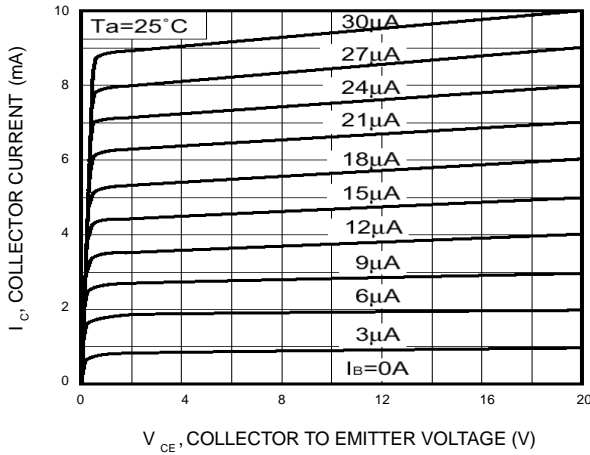


Fig.4 DC current gain vs. collector current (I)

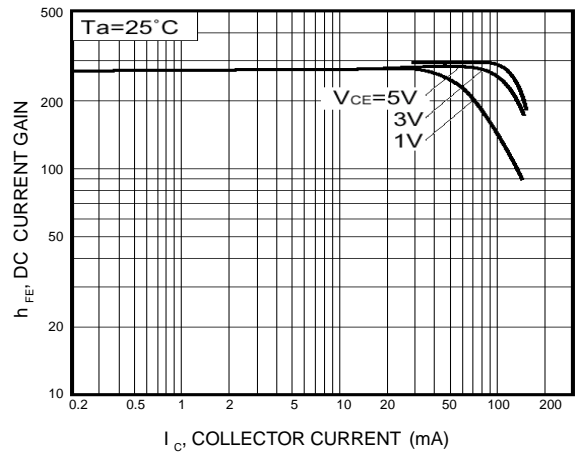


Fig.5 DC current gain vs. collector current (II)

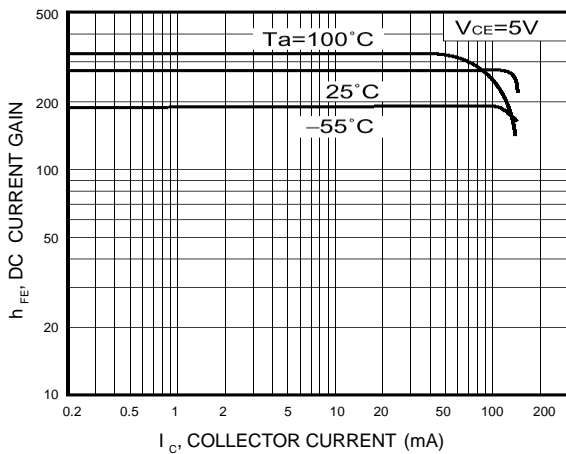


Fig.6 Collector-emitter saturation voltage vs. collector current

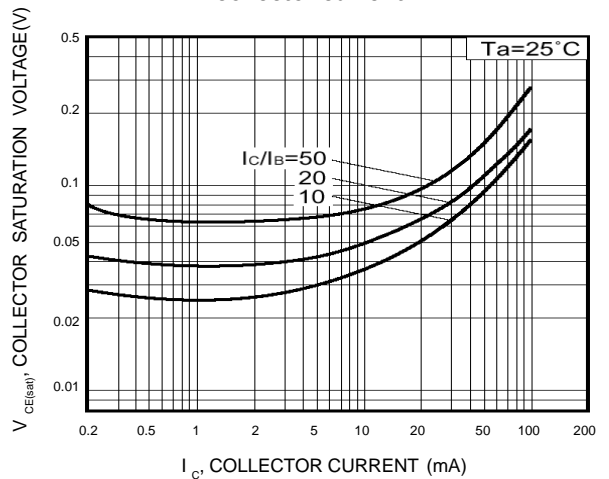


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

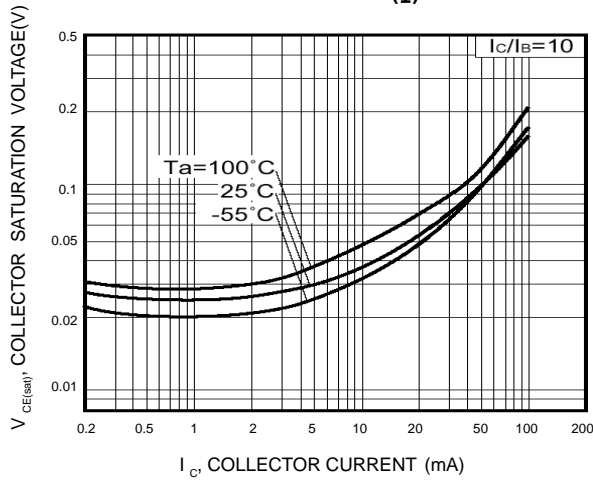


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

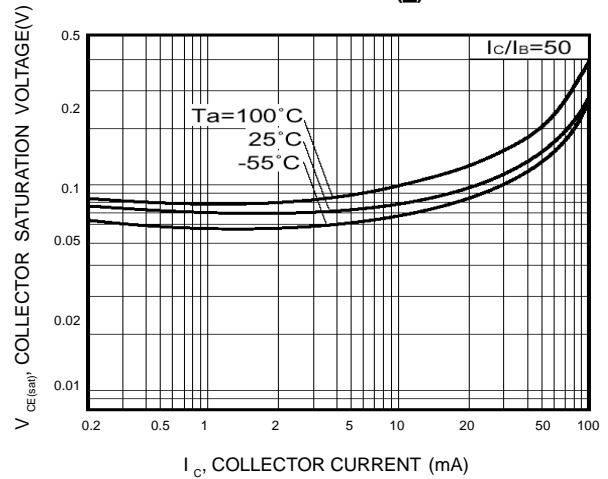
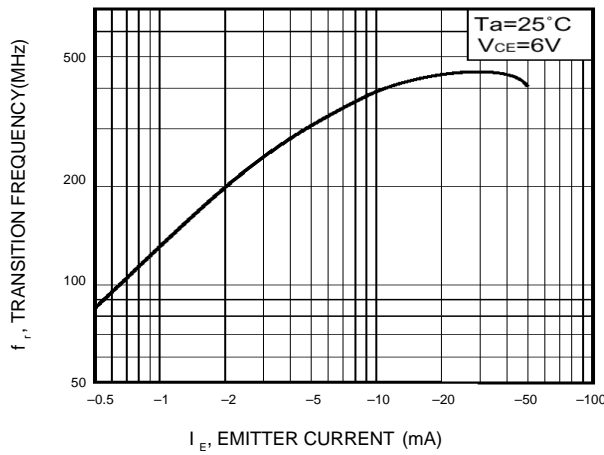


Fig.9 Gain bandwidth product vs. emitter current



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

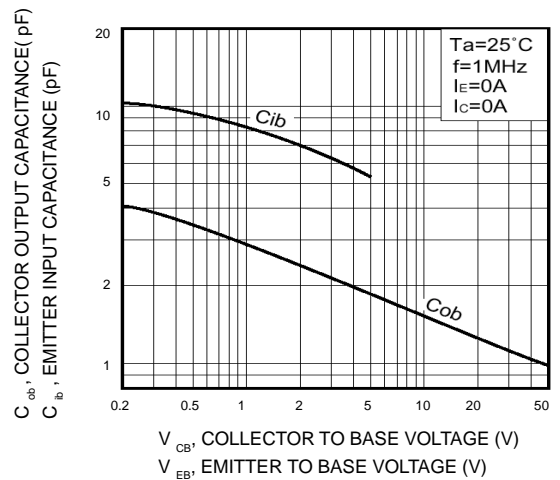
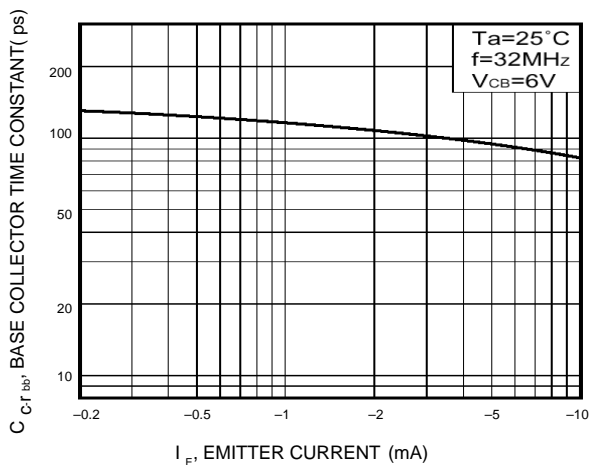


Fig.11 Base-collector time constant vs. emitter current





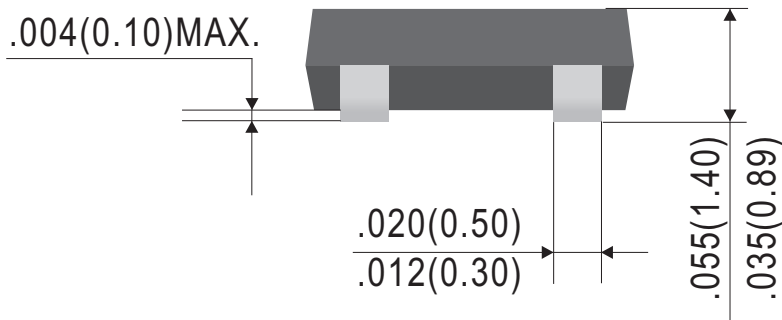
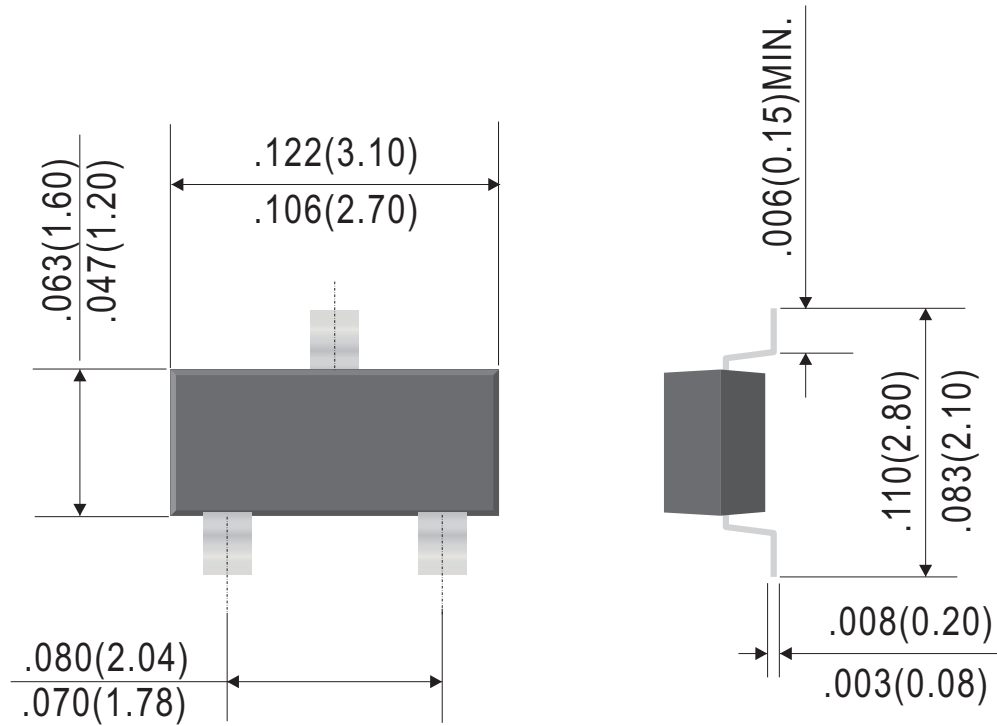
WILLAS



General Purpose Transistors

2SC1623xLT1

SOT-23



Dimensions in inches and (millimeters)

Ordering Information:

Device PN	Packing
2SC1623 x ⁽²⁾ LT1 G ⁽¹⁾ -WS	Tape&Reel: 3 Kpcs/Reel

Note: (1) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

(2) CLASSIFICATION OF hFE RANK

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