



Micro Commercial Components

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Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- High DC Current Gain: $h_{FE}=600$ Max. ($V_{CE}=6.0V$, $I_C=1.0mA$)
- High voltage: $V_{CEO}=50V$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	50	V
V_{CBO}	Collector-Base Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current	100	mA
P_C	Collector power dissipation	200	mW
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
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OFF CHARACTERISTICS

I_{CBO}	Collector Cutoff Current ($V_{CB}=60Vdc$, $I_E=0$)	---	---	0.1	μA
I_{EBO}	Emitter Cutoff Current ($V_{EB}=5.0Vdc$, $I_C=0$)	---	---	0.1	μA

ON CHARACTERISTICS

h_F	DC Current Gain* ($I_C=1.0mA$, $V_{CE}=6.0Vdc$)	135	---	600	---
$V_{CE(sat)}$	Collector Saturation Voltage* ($I_C=100mA$, $I_B=10mA$)	---	0.15	0.3	Vdc
$V_{BE(sat)}$	Base Saturation Voltage* ($I_C=100mA$, $I_B=10mA$)	---	0.86	1.0	Vdc
V_{BE}	Base Emitter Voltage* ($V_{CE}=6.0Vdc$, $I_C=1.0mA$)	0.55	0.62	0.65	Vdc
C_{ob}	Collector Capacitance ($V_{CB}=6.0Vdc$, $I_E=0$, $f=1.0MHz$)	---	3.0	---	pF
f_T	Gain Bandwidth product ($V_{CE}=6.0Vdc$, $I_E=10mA$)	---	250	---	MHz

h_{FE} CLASSIFICATION

Marking	L5	L6	L7
h_{FE}	135-270	200-400	300-600

* Pulse Test $PW < 350\mu s$, duty cycle $< 2\%$

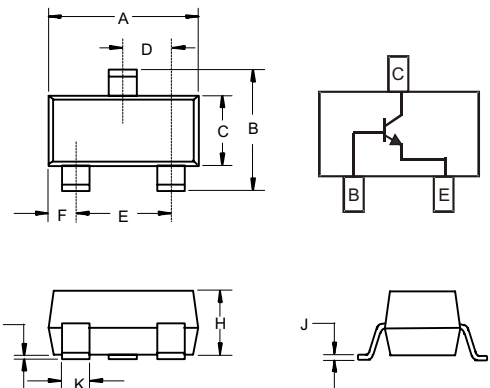
2SC1623-L5

2SC1623-L6

2SC1623-L7

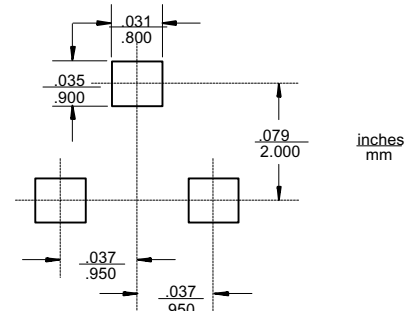
NPN Silicon Epitaxial Transistors

SOT-23



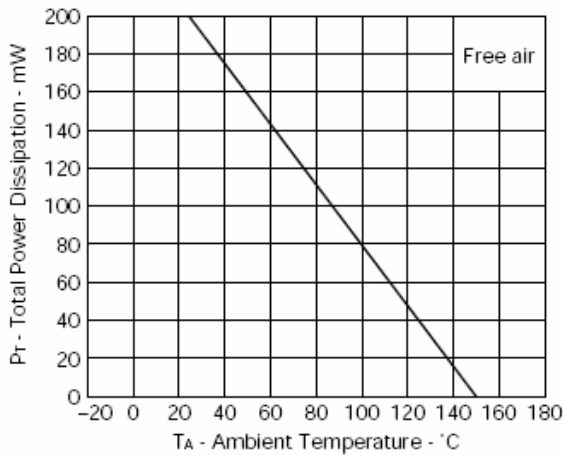
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

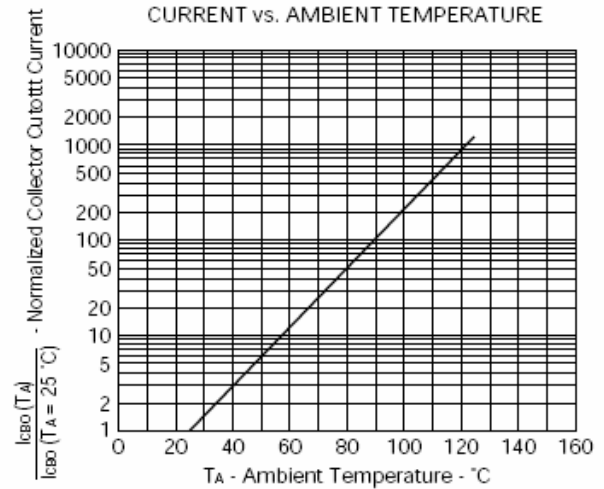


Typical Characteristics

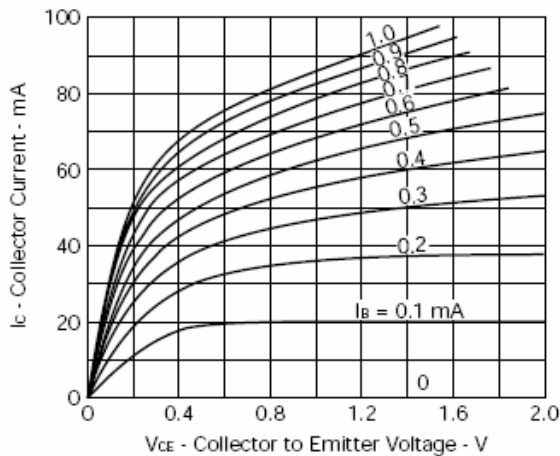
TOTAL POWER DISSIPATION vs.
AMBIENT TEMPERATURE



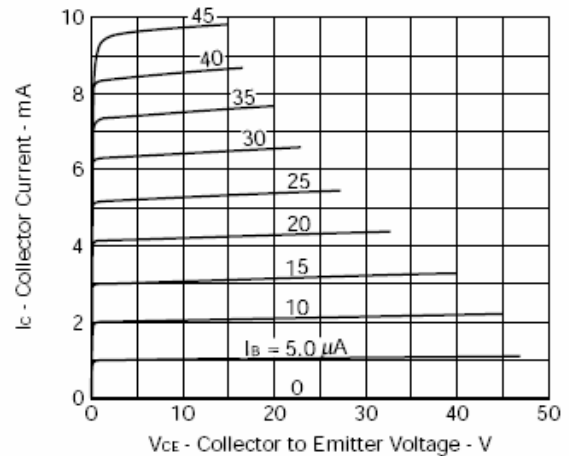
NORMALIZED COLLECTOR CUTOFF
CURRENT vs. AMBIENT TEMPERATURE



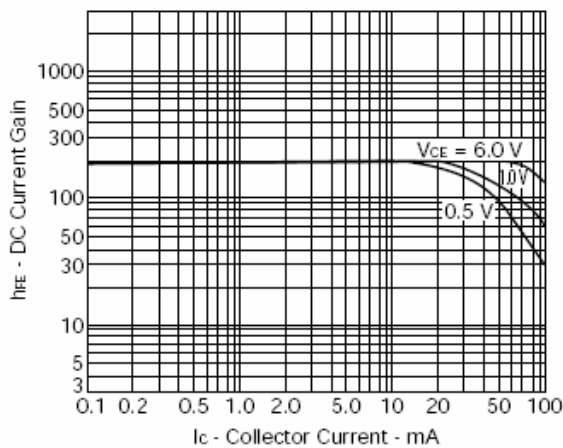
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



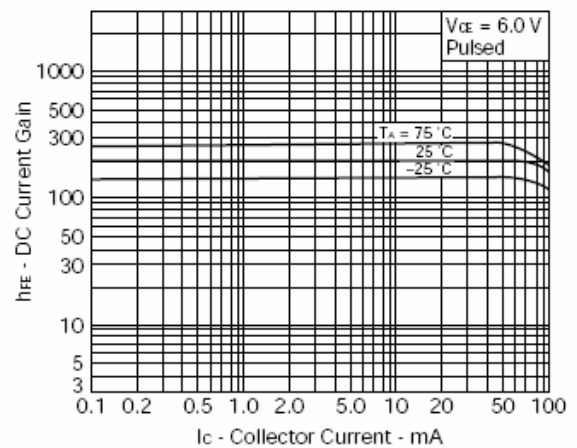
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



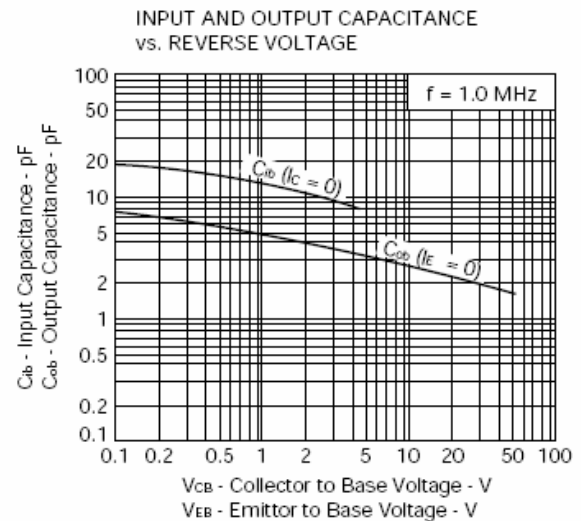
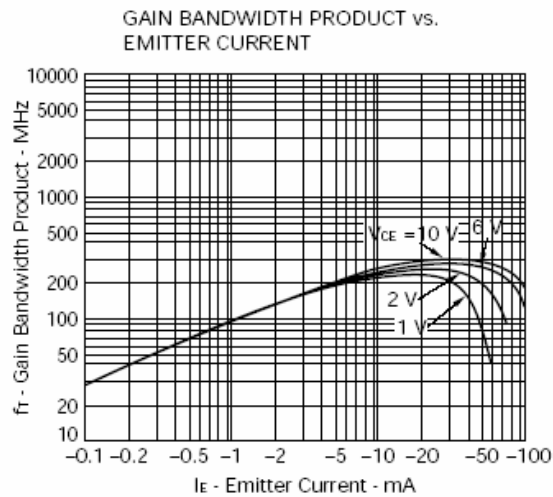
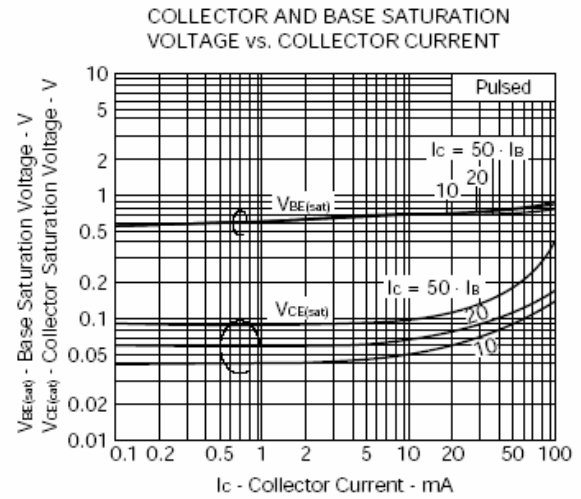
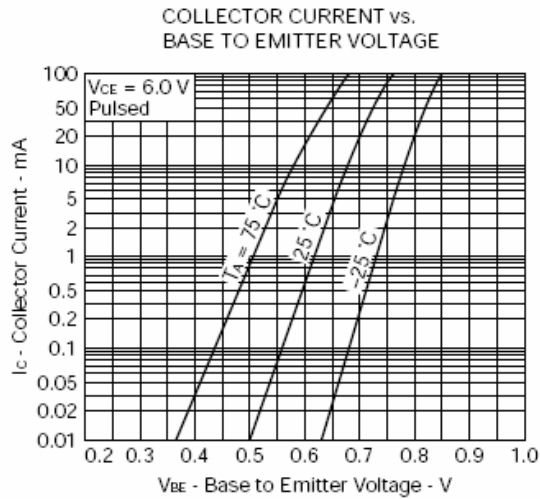
DC CURRENT GAIN vs.
COLLECTOR CURRENT



DC CURRENT GAIN vs.
COLLECTOR CURRENT



Typical Characteristics



Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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