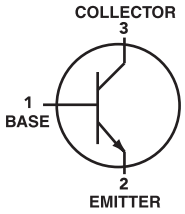
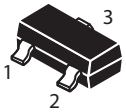
WEITRON

C945LT1

NPN Transistors

Lead(Pb)-Free





SOT-23

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	50	Vdc
Collector-Base Voltage	V_{CBO}	60	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current-Continuous	I_C	150	mAdc

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (1) TA=25°C	P_D	200	mW
Derate above 25°C		1.6	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	625	°C/W
Junction and Storage, Temperature	T_J,Tstg	-55 to +150	°C

DEVICE MARKING

C945LT1=CR

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I_C=100 uAdc, I_B=0)	$V_{(BR)CEO}$	50	-	Vdc
Collector-Base Breakdown Voltage (I_C= 1 mAdc, I_E=0)	$V_{(BR)CBO}$	60	-	Vdc
Emitter-Base Breakdown Voltage (I_E=100 uAdc, I_C=0)	$V_{(BR)EBO}$	5.0	-	Vdc
Collector Cutoff Current (V_{CE}=60 Vdc, I_E= 0)	I_{CEO}	-	0.1	uAdc
Collector Cutoff Current (V_{CB}= 45 Vdc, I_E=0)	I_{CBO}	-	0.1	uAdc
Emitter Cutoff Current (V_{EB}= 5.0 Vdc, I_C=0)	I_{EBO}	-	0.1	uAdc

1.FR-5=1.0 x 0.75 x 0.062 in

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted) (Countinued)

Characteristics	Symbol	Min	Typ	Max	Unit

ON CHARACTERISTICS

DC Current Gain (I_C=1 mAdc, V_{CE}=6.0 Vdc)	h_{FE}	130	-	400	-
Collector-Emitter Saturation Voltage (I_C=100 mAdc, I_B=10mAdc)	$V_{CE(sat)}$	-	-	0.3	Vdc
Base-Emitter Voltage (I_E=310mA)	V_{BEF}	-	-	1.4	V
Transition Frequence (I_C=-10mAdc, V_{CE}=6 Vdc,f=30 MHZ)	f_T	150	-	-	MHz

CLASSIFICATION OF h_{FE}

Rank	L	H
Range	130-200	200-400

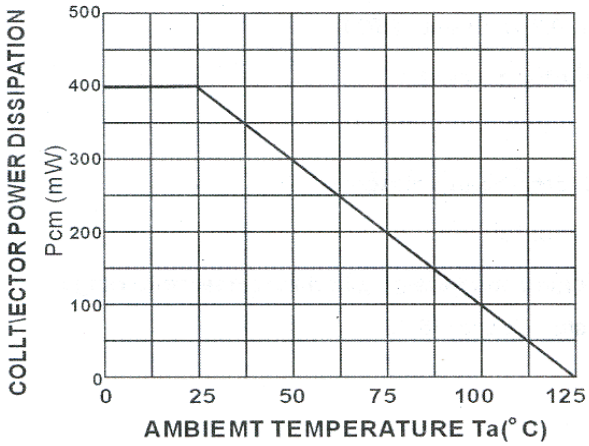


FIG1. Total Power Dissipation vs Ambient Temperature

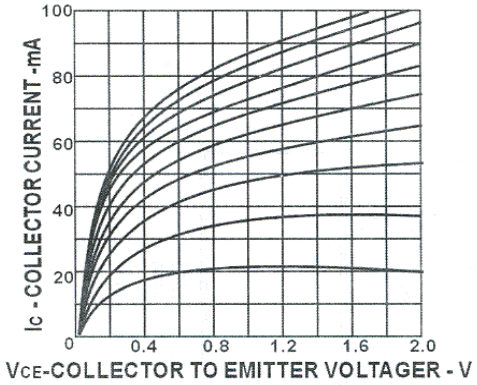


FIG2. Collector Current vs Collector to Emitter Voltage

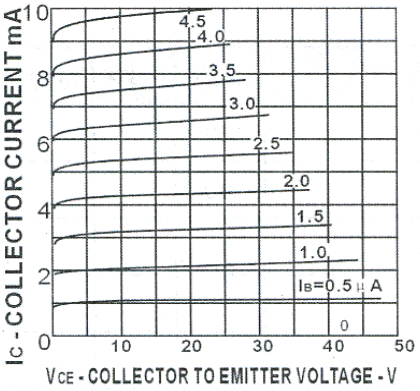


FIG.3 Collector Current vs Collector to Emitter Voltage

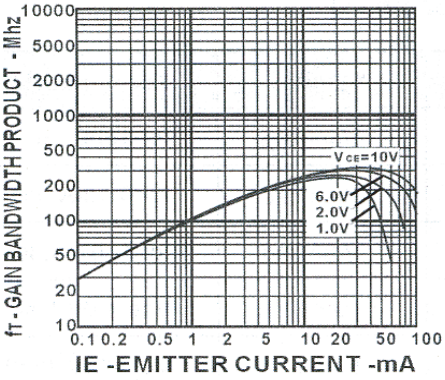


FIG.4 Gain Bandwidth Product vs Emitter Current

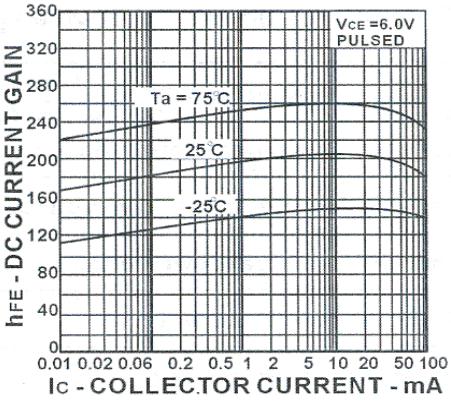


FIG.5 DC Current Gain vs Collector Current

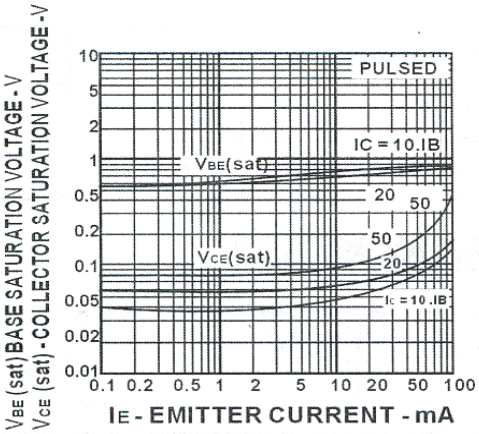


FIG.6 Collector and Bade Saturation Voltage vs Collector Current

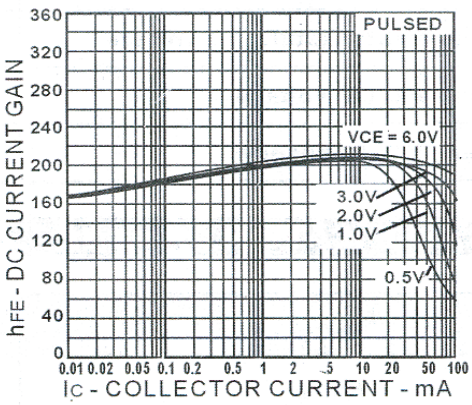
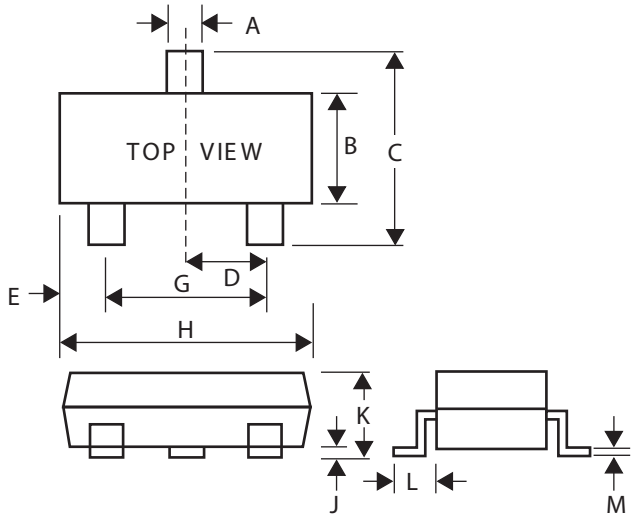


FIG.7 DC Current Gain vs Collector Current

SOT-23 Package Outline Dimensions

Unit:mm



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