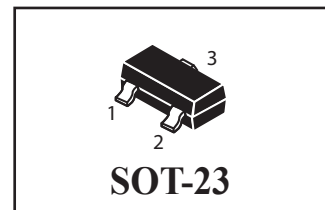
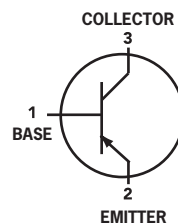


**General Purpose Transistor**  
**PNP Silicon**

**MAXIMUM RATINGS (Ta=25 °C)**

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V <sub>CEO</sub>	-50	V <sub>dc</sub>
Collector-Base Voltage	V <sub>CBO</sub>	-60	V <sub>dc</sub>
Emitter-Base Voltage	V <sub>EBO</sub>	-5.0	V <sub>dc</sub>
Collector Current -Continuous	I <sub>C</sub>	-150	mAdc

**THERMAL CHARACTERISTICS**

Characteristics	Symbol	Value	Unit
Total Device Dissipation FR-5 Board <sup>(1)</sup> T <sub>A</sub> =25 °C	P <sub>D</sub>	200	mW
Derate above 25 °C		1.6	mW/°C
Thermal Resistance, Junction Ambient	R <sub>θJA</sub>	625	°C/W
Junction and Storage, Temperature	T <sub>J</sub> , T <sub>stg</sub>	-55 to +150	°C

**Device Marking**

A733=CS

**ELECTRICAL CHARACTERISTICS**

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I <sub>C</sub> = -1 mAdc, I <sub>E</sub> =0)	V <sub>(BR)CEO</sub>	-50	-	V <sub>dc</sub>
Collector-Base Breakdown Voltage (I <sub>C</sub> = -5 uAdc, I <sub>E</sub> =0)	V <sub>(BR)CBO</sub>	-60	-	V <sub>dc</sub>
Emitter-Base Breakdown Voltage (I <sub>E</sub> = -50 uAdc, I <sub>C</sub> =0)	V <sub>(BR)EBO</sub>	-5.0	-	V <sub>dc</sub>
Collector Cutoff Current (V <sub>CB</sub> = -60V <sub>dc</sub> , I <sub>E</sub> =0)	I <sub>CBO</sub>	-	-0.1	uAdc
Emitter Cutoff Current (V <sub>EB</sub> = -5.0 V <sub>dc</sub> , I <sub>C</sub> =0)	I <sub>EBO</sub>	-	-0.1	uAdc

1. FR-5=1.0 ×0.75 ×0.062 in

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$  unless otherwise noted) (Continued)

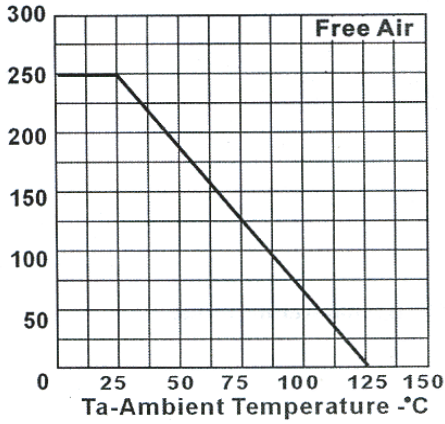
Characteristics	Symbol	Min	Typ	Max	Unit
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**ON CHARACTERISTICS**

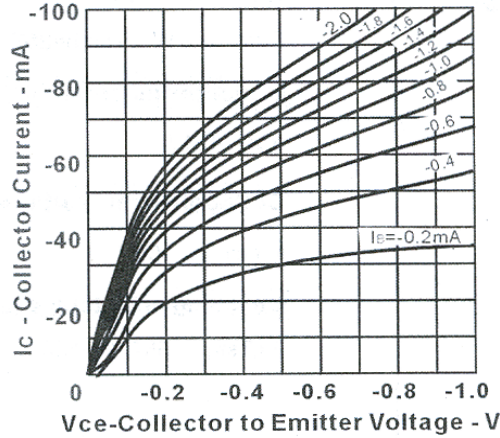
DC Current Gain ( $I_C = -1\text{ mAdc}, V_{CE} = -6\text{ Vdc}$ )	$h_{FE}$	120	-	475	-
Collector-Emitter Saturation Voltage ( $I_C = -100\text{ mAdc}, I_B = -10\text{ mAdc}$ )	$V_{CE(sat)}$	-	-0.18	-0.3	Vdc
Transition Frequency ( $I_C = -10\text{ mAdc}, V_{CE} = -6\text{ Vdc}, f = 30\text{ MHz}$ )	$f_T$	50	-	-	MHz

**CLASSIFICATION OF  $h_{FE}$** 

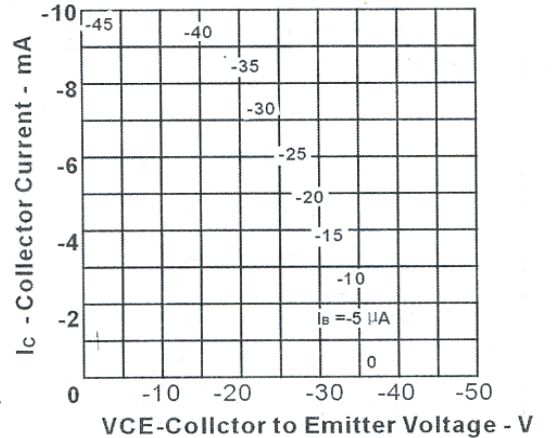
Rank	L	H
Range	120-200	200-475



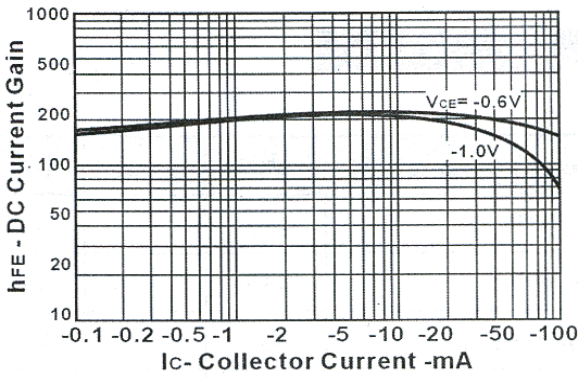
**FIG.1 Total Power Dissipation vs. Ambient Temperature**



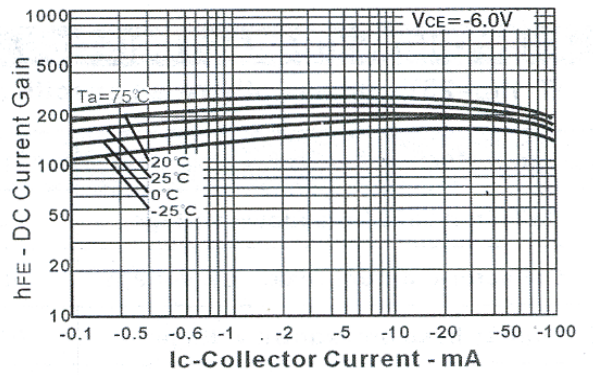
**FIG.2 Collector Current vs. Collector to Emitter Voltage**



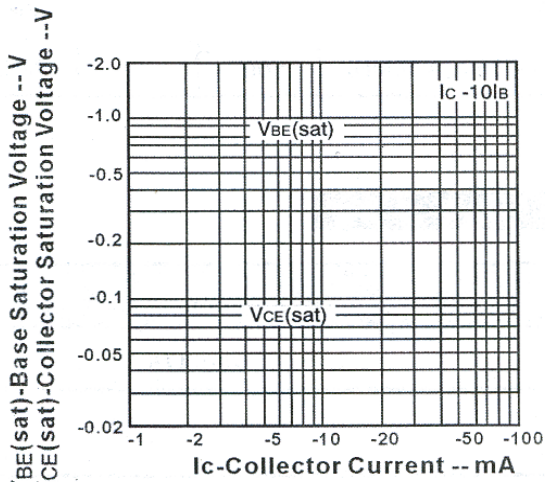
**FIG.3 Collector Current vs. Collector to Emitter Voltage**



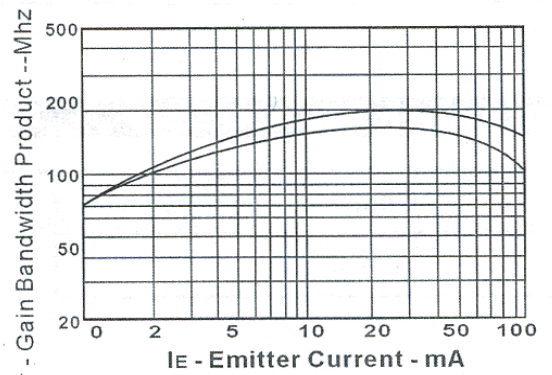
**FIG.4 DC Current Gain vs. Collector Current**



**FIG.5 DC Current Gain vs. Collector Current**



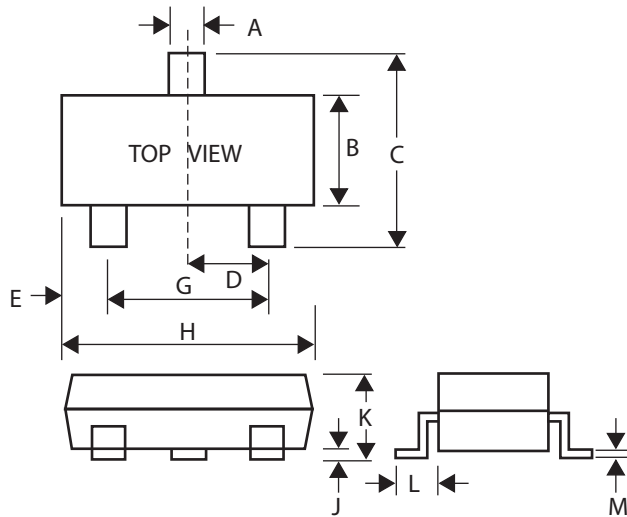
**FIG.6 Collector and Base Saturation Voltage vs. Collector Current**



**FIG.7 Gain Bandwidth Product vs. Emitter 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