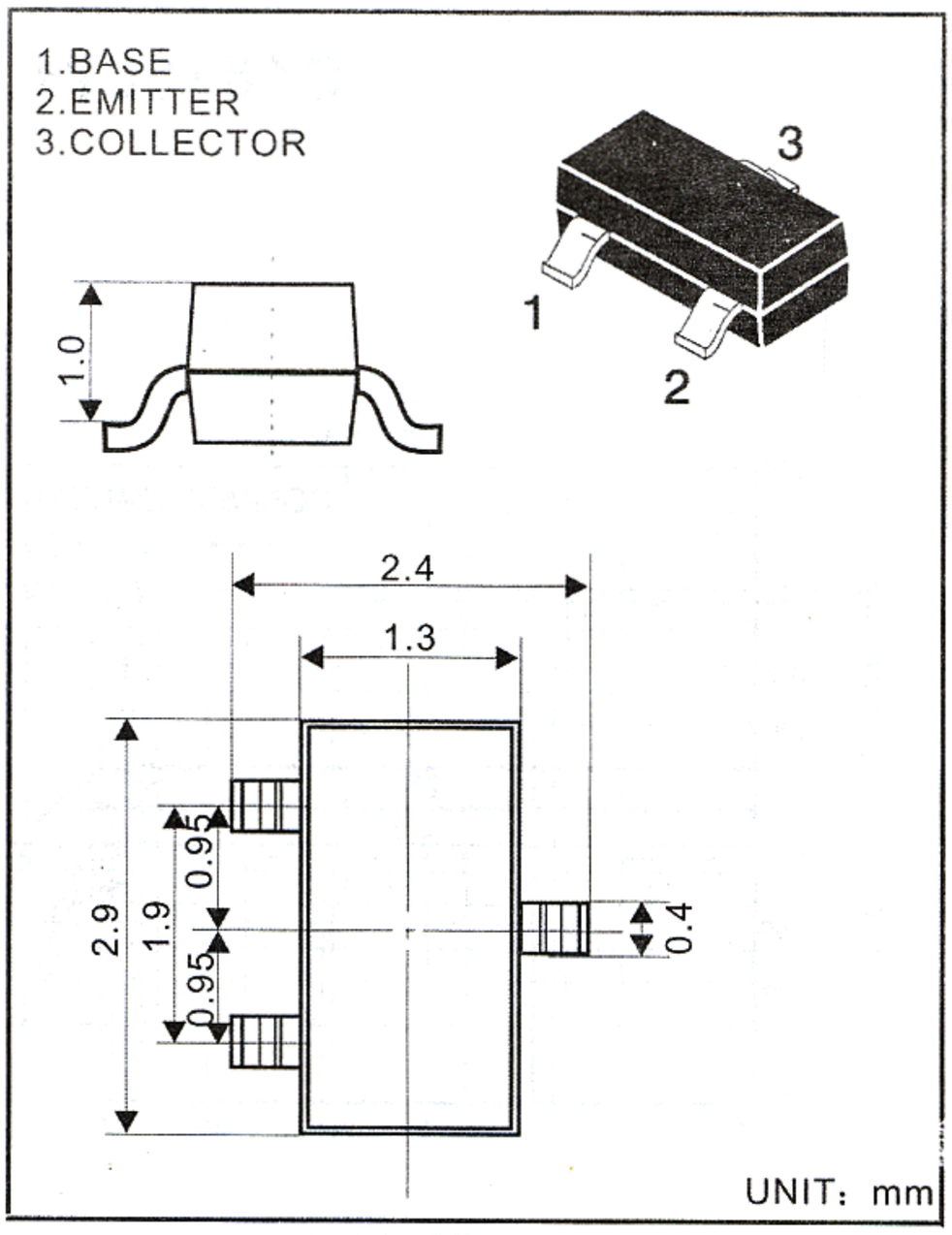
SOT-23 Plastic-Encapsulate Transistors



C1815LT1 TRANSISTOR (NPN)

FEATURES

Power dissipation

P_{CM}: 0.2 W (Tamb=25℃)

Collector current

I_{CM}: 0.15 A

Collector-base voltage

$V_{(BR)CBO}$: 60V

Operating and storage junction temperature range

T_J,Tstg : -55℃ to+150℃

ELECTRICAL CHARACTERISTICS

(Tamp=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 100μA, I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 0.1mA, I_B=0	50			V
Collector cut-off current	I_{CBO}	V_{CB}= 60V,I_E=0			0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}= 50V, I_B=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V, I_C=0mA			0.1	μA
DC current gain	H_{FE}	V_{CE}= 6V, I_C= 10mA	130		400	
Collector-emitter saturation voltage	V_{CEsat}	I_C= 100mA,I_B= 10mA			0.25	V
Base-emitter saturation voltage	V_{BEsat}	I_C= 100mA,I_B= 10mA			1	V
Base-emitter voltage	V_{BEF}	I_E= 310mA			1.45	V
Transition frequency	f_T	V_{CE}= 10V,I_C= 1mA,f=30MHz	80			MHz

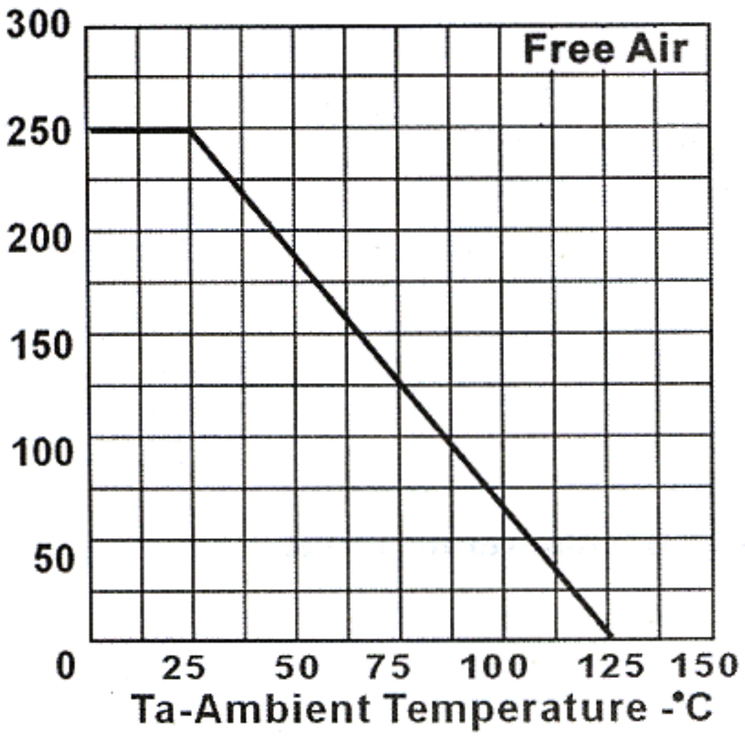
CLASSIFICATION OF h_{FE}

Rank	L	H
Range	130-200	200-400

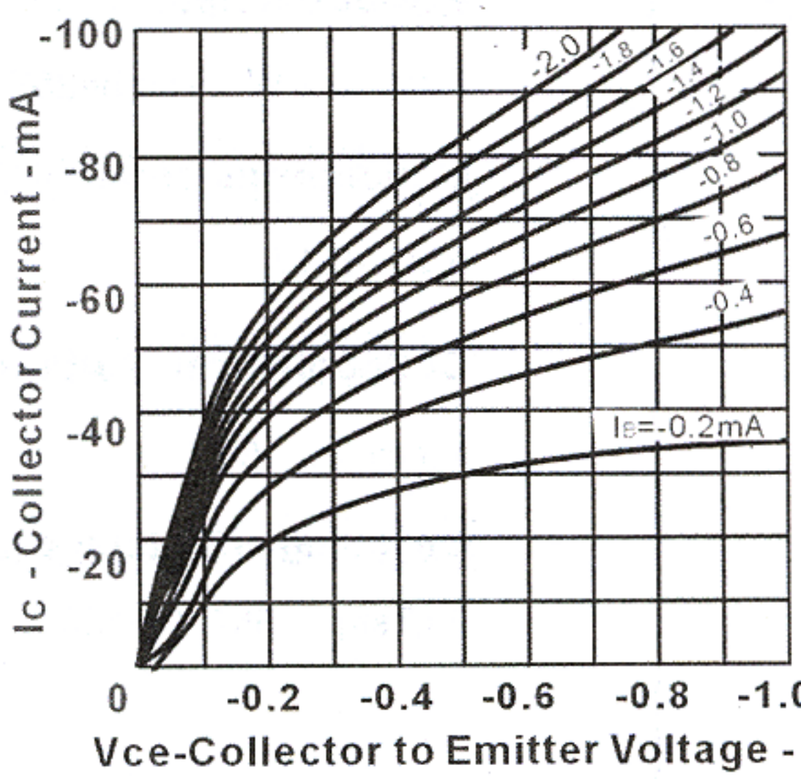
DEVICE MARKING : C1815LT1=HF

Typical Characteristics

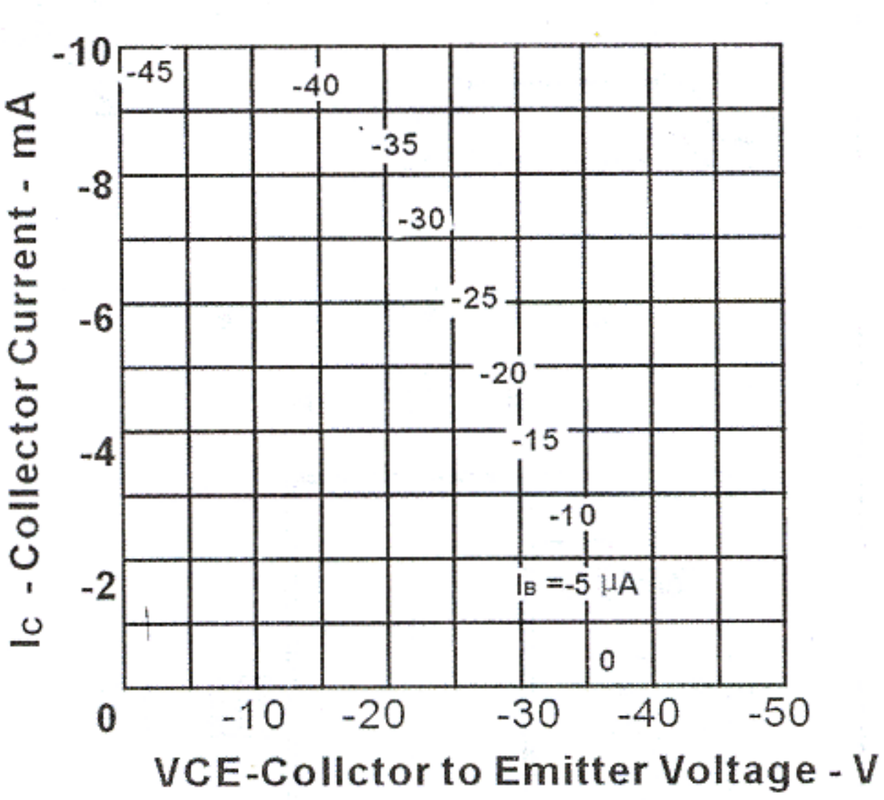
TOTAL POWER DISSIPATION
vs.AMBISENT THEMPERATURE



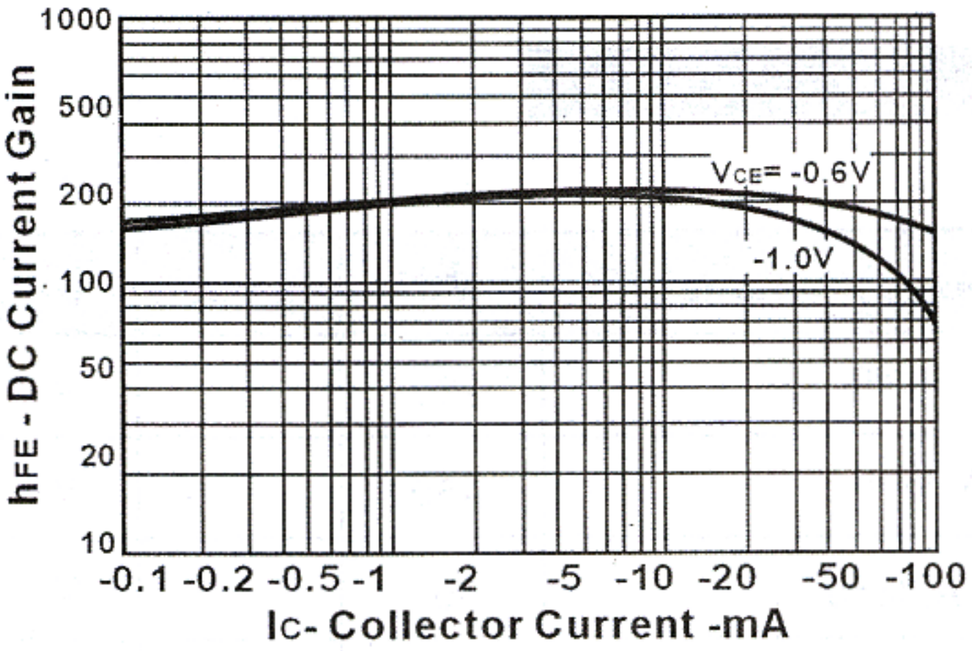
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



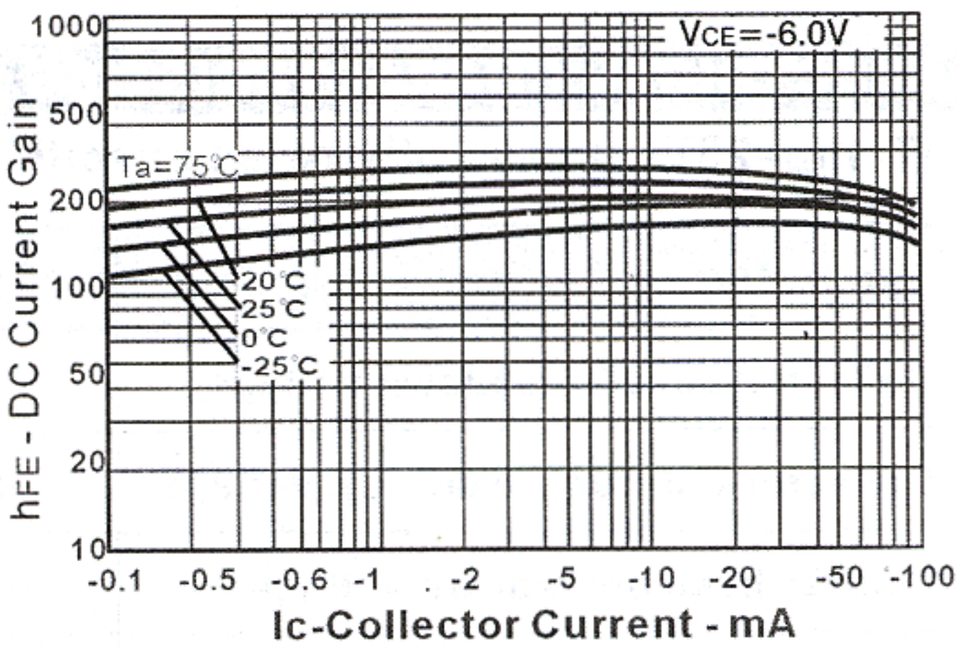
COLLECTOR CURRENT vs.
COLLECTOR TO EMITTER VOLTAGE



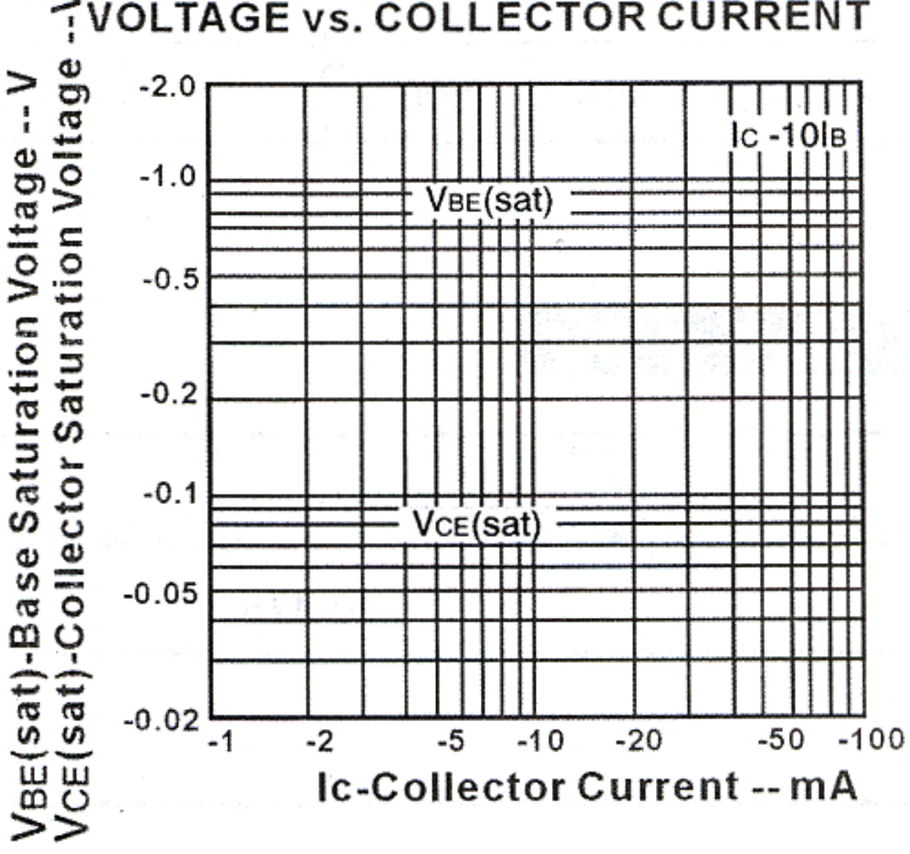
DC CURRENT GAIN vs.
COLLECTOR CURRENT



DC CURRENT GAIN vs.
COLLECTOR CURRENT



COLLECTOR AND BASE SATURATION
VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT
vs. EMTTER CURRENT