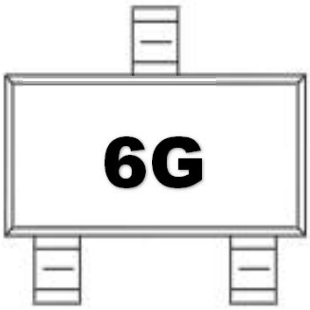
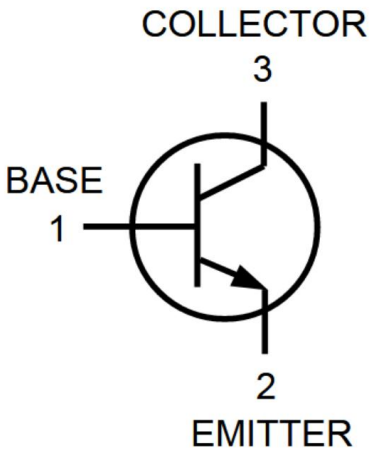
SOT-23 Plastic-Encapsulate MOSFETS

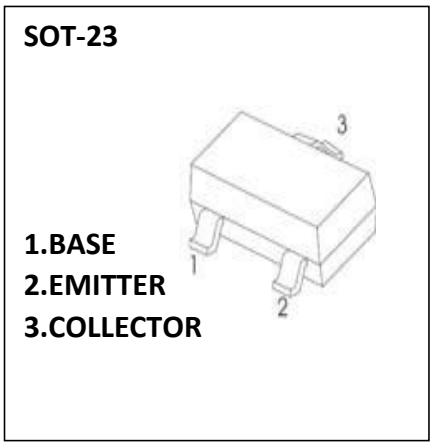
BC818 TRANSISTOR (NPN)

MARKING:



Equivalent Circuit:





FEATURES:

- For general AF applications
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Complementary types: BC808 (PNP)

MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	30	V
Collector-Emitter Voltage	VCEO	25	V
Emitter-Base Voltage	VEBO	5	V
Collector Current -Continuous	IC	500	mA
Collector Current -Puised	ICM	200	mA
Collector Power Dissipation	PC	300	mW
Thermal Resistance From Junction To Ambient	RΘJA	417	℃/W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55～+150	℃

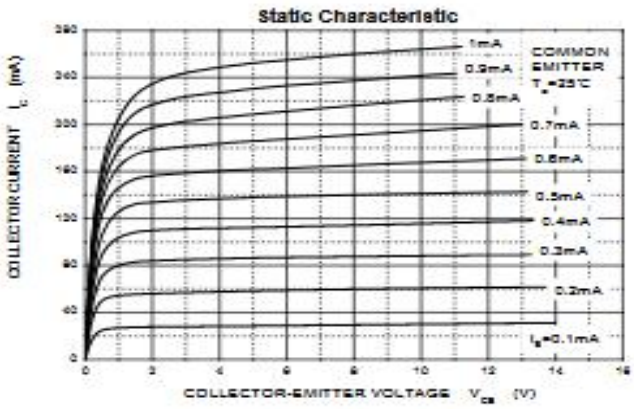
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

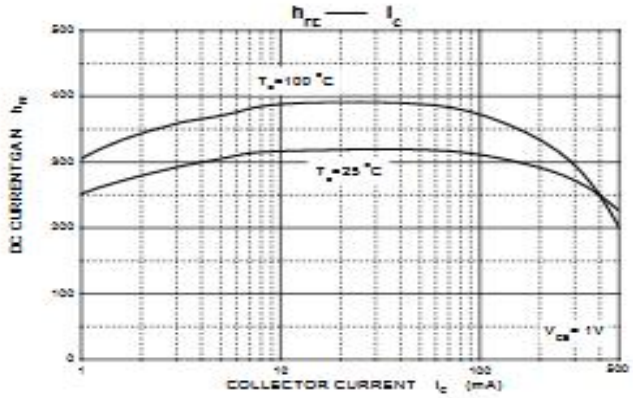
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= 10μA, IE=0	30			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 10mA, IB=0	25			V
Emitter-base breakdown voltage	V(BR)EBO	IE=10μA, IC=0	5			V
Collector cut-off current	ICBO	VCB= 25 V , IE=0			0.1	μA
Emitter cut-off current	IEBO	VEB= 5V , IC=0			0.1	μA
DC current gain	hFE	VCE= 1V, IC= 100mA	100		630	
	hFE	VCE= 1V, IC= 300mA	60			
Collector-emitter saturation voltage	VCE(sat)	IC= 500mA, IB= 50mA			0.7	V
Base-emitter saturation voltage	VBE(sat)	IC= 500 mA, IB= 50mA			1.2	V
Base-emitter voltage	VBE	VCE=1V, IC= 500mA			1.2	V
Transition frequency	fT	VCE= 5V, IC= 50mA f=100MHz		170		MHz
Collector output capacitance	Cob	VCB=10V, IE=0, f=1MHz		6		PF

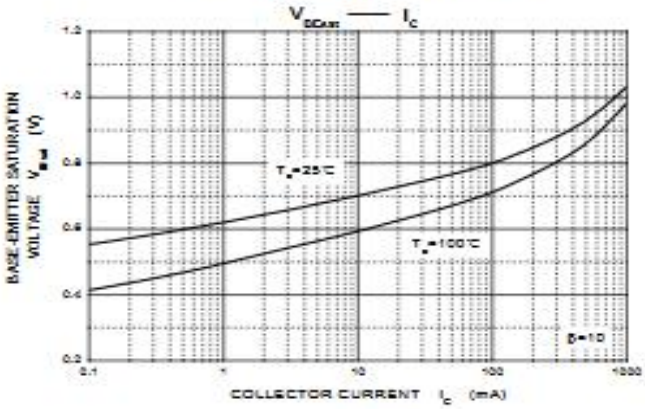
CLASSIFICATION OF hFE

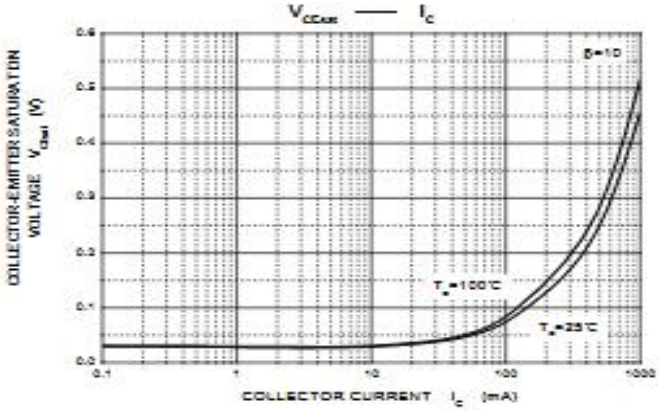
Rank	BC818-16	BC818-25	BC818-40
Range	100-250	160-400	250-630
Marking	6E	6F	6G

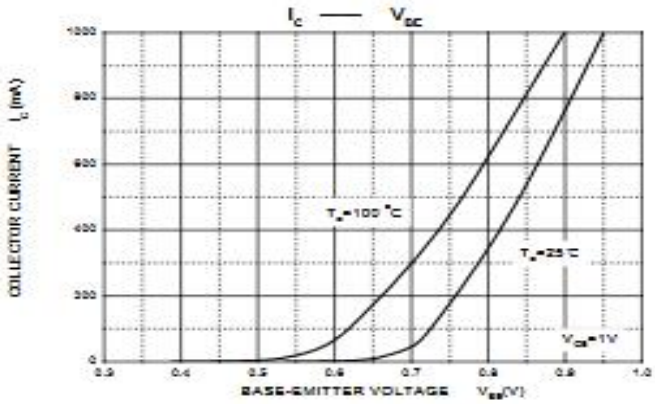
TYPICAL ELEC TRICAL AND THERMAL CHARACTERISTICS

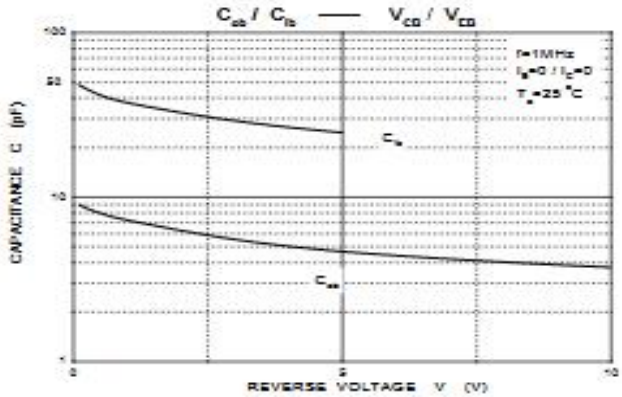


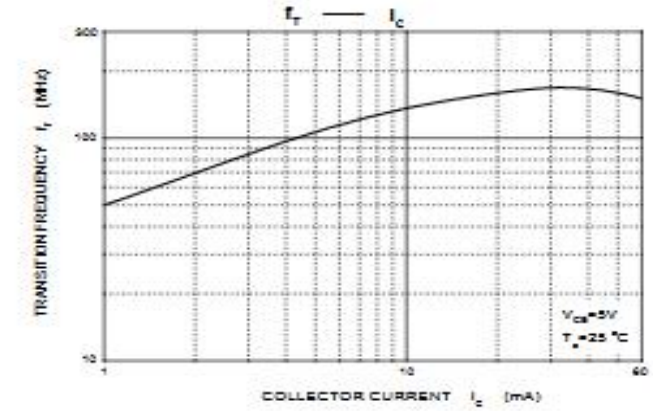


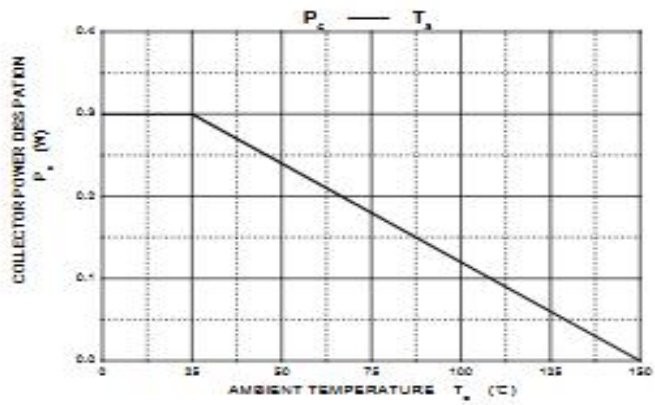




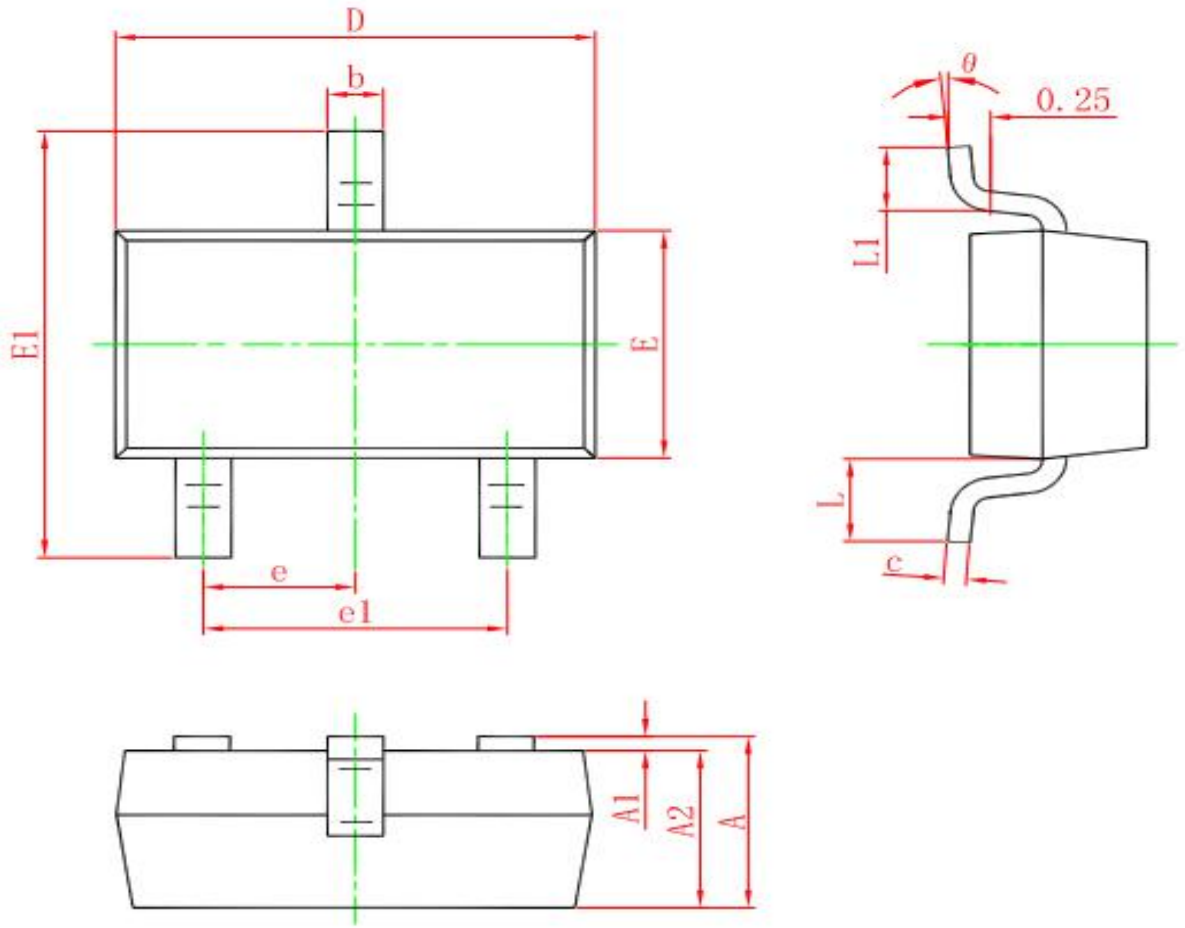








SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°