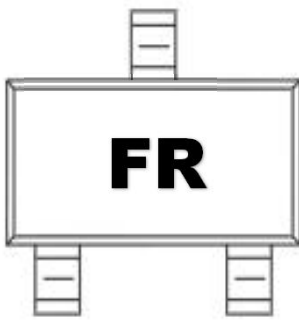
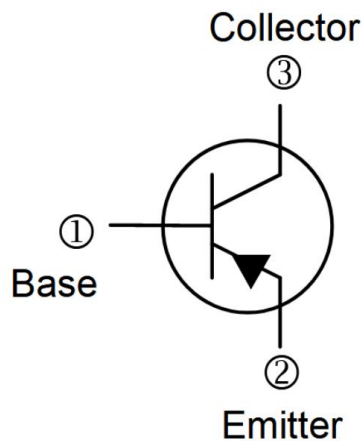


TRANSISTOR (PNP)

MARKING: FQ、FR、FS

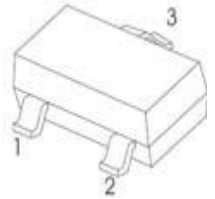


Equivalent Circuit:



SOT-23

1.BASE
2.EMITTER
3.COLLECTOR



FEATURES:

- ※ Complimentary of the 2SC2412
- ※ Excellent hFE linearity

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	-60	V
Collector-Emitter Voltage	VCEO	-50	V
Emitter-Base Voltage	VEBO	-6	V
Collector Current	IC	-150	mA
Collector Power Dissipation	PC	200	mW
Thermal Resistance From Junction To Ambient	RθJA	150	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C



2SA1037

SOT-23 Plastic-Encapsulate Transistors

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

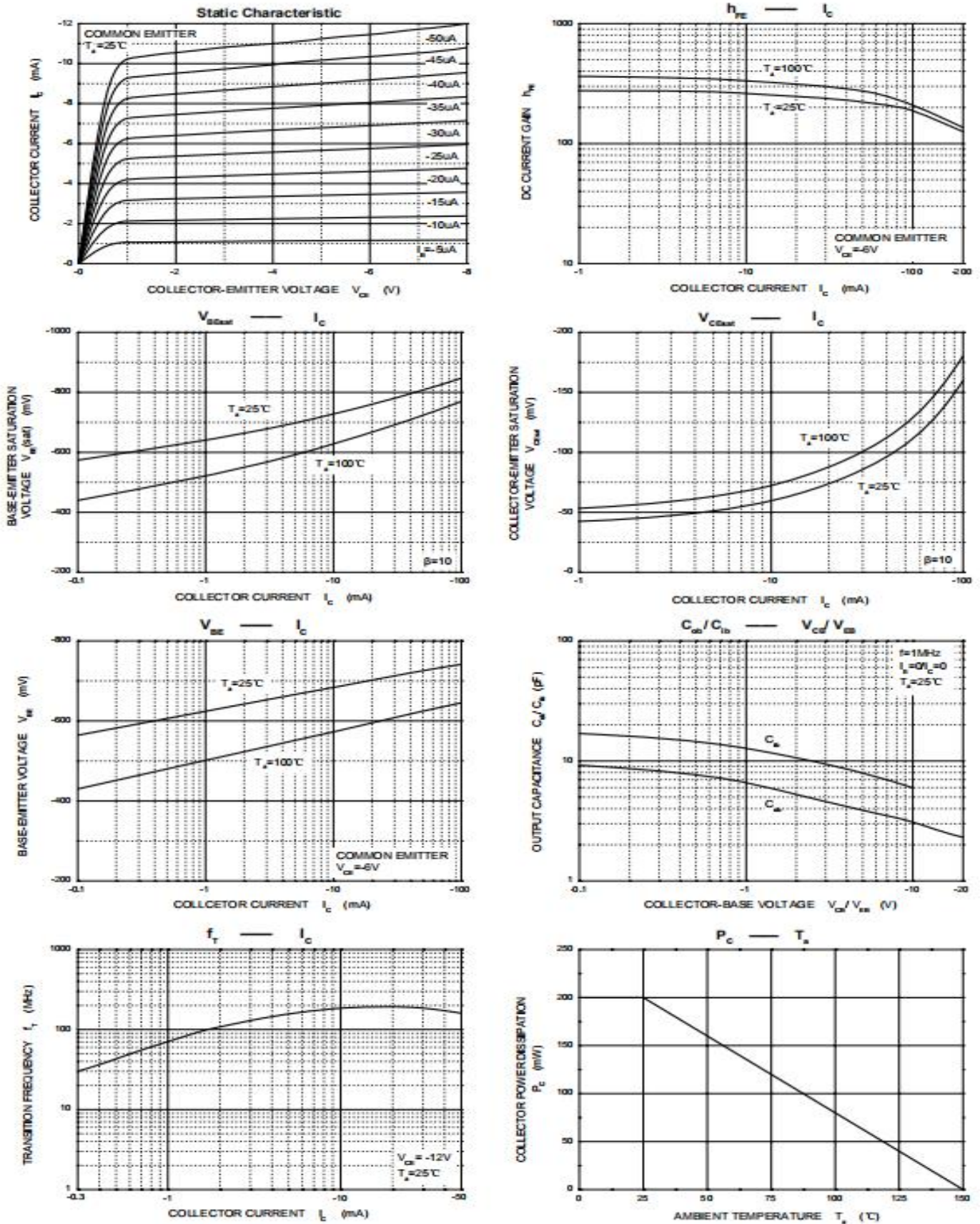
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= -50μA, IE=0	-60			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= -1mA, IB=0	-50			V
Emitter-base breakdown voltage	V(BR)EBO	IE= -50μA, IC=0	-6			V
Collector cut-off current	ICBO	VCB= -60 V , IE=0			-0.1	μA
Emitter cut-off current	IEBO	VEB= -6V , IC=0			-0.1	μA
DC current gain	hFE	VCE= -6V, IC= -1mA	120		560	
	hFE	VCE= -6V, IC= -10mA	100			
Collector-emitter saturation voltage	VCE(sat)	IC= -50 mA, IB= -5mA			-0.5	V
Base-emitter saturation voltage	VBE(sat)	VCE=-6V, IC=- 10mA			-0.7	V
Transition frequency	fT	VCE= -12V, IC= -2mA f= 30MHz		140		MHz
Collector Output Capacitance	Cob	VCE= -12V, IE= 0 f=1MHz		4		pf

※ Pulse test: Pulse width≤350μs,Duty Cycle≤2%

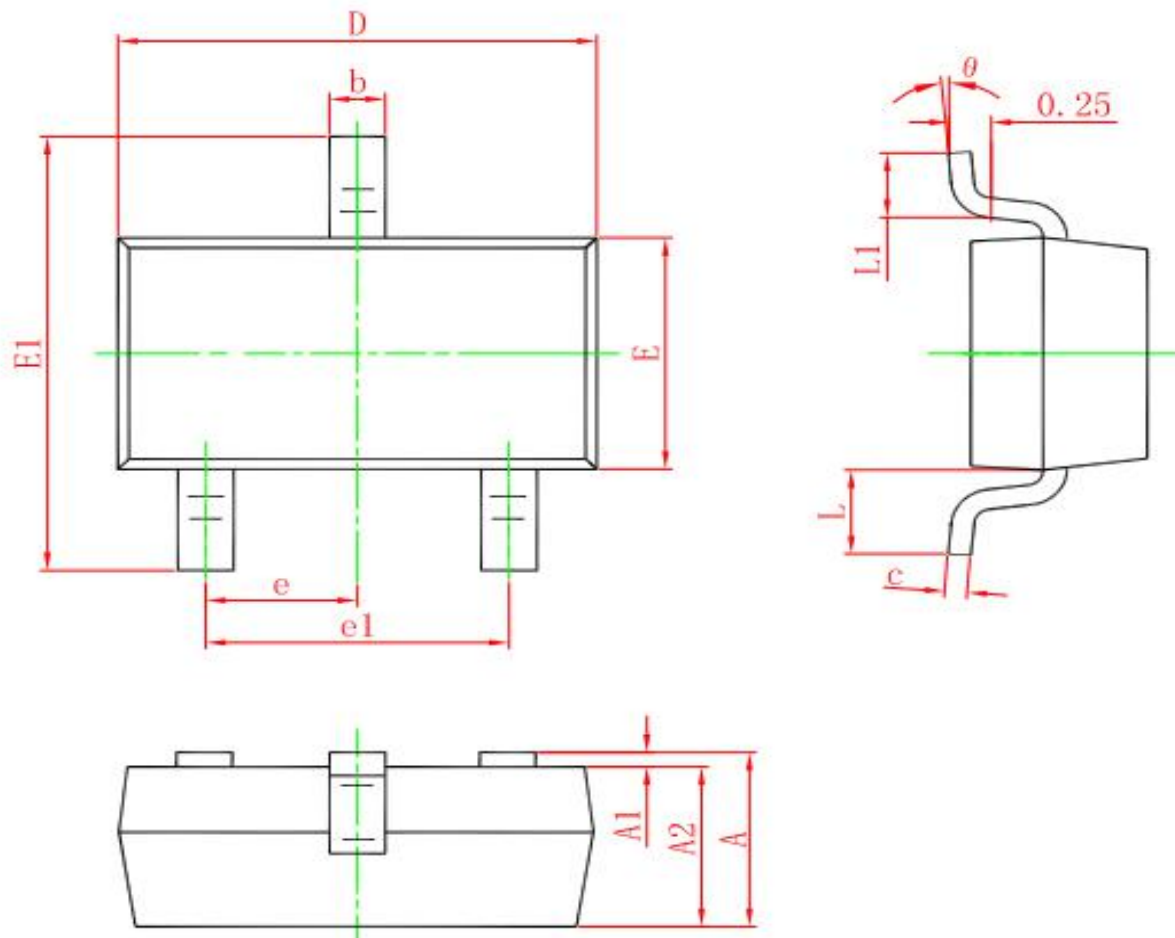
CLASSIFICATION OF hFE

RANK	Q	R	S
Range	120-270	180-390	270-560

TYPICAL ELECTRICAL 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°