



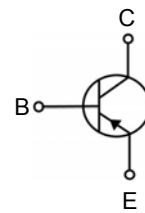
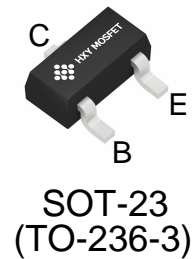
Features

- Power Transistor
- High Voltage and Current
- Low Collector-emitter saturation voltage

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
2SA1037	SOT-23 (TO-236-3)	FR	3000

1. BASE
2. EMITTER
3. COLLECTOR



Maxmim Ratings (Ta=25 unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-150	mA
P_C	Collector Power Dissipation	400	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Electrcal Characteristics (Ta=25 unless otherwise specified)

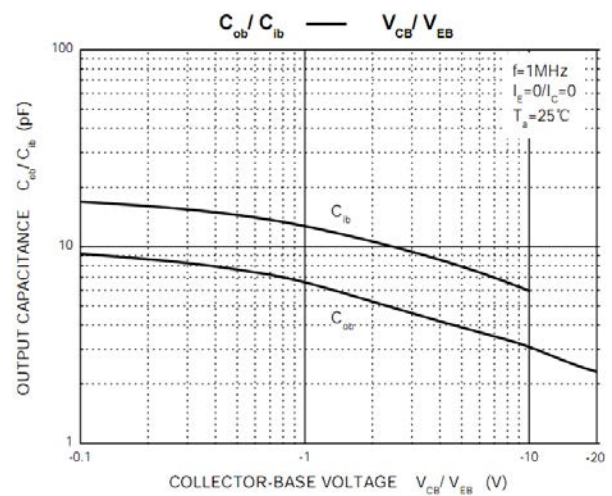
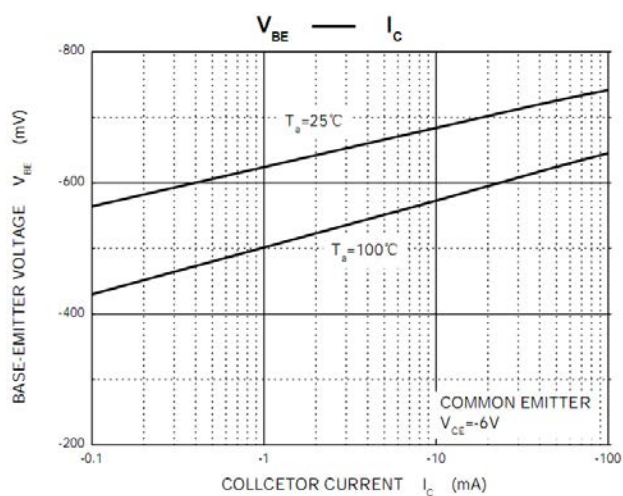
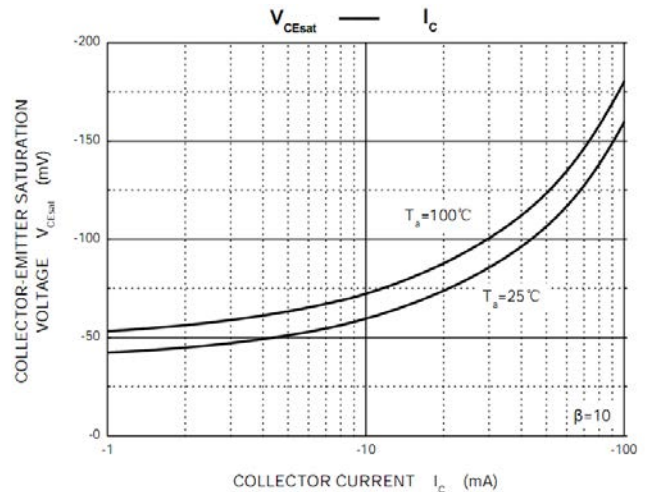
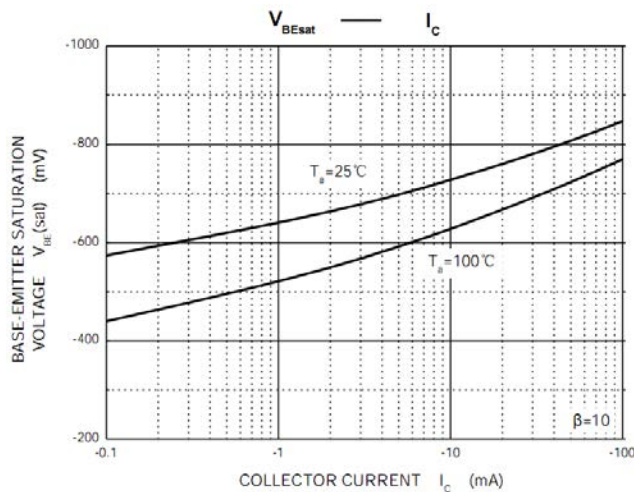
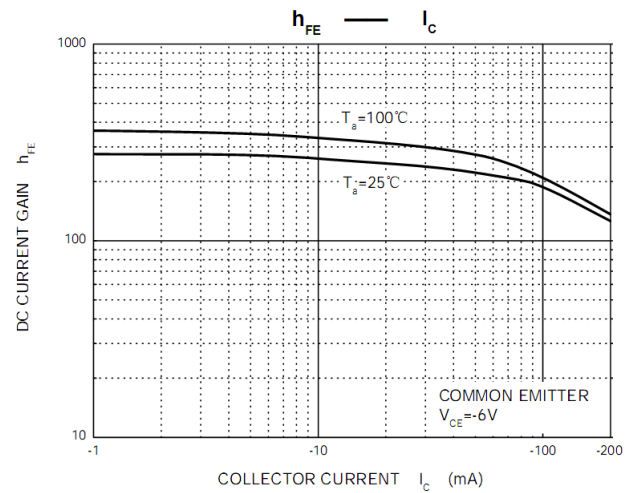
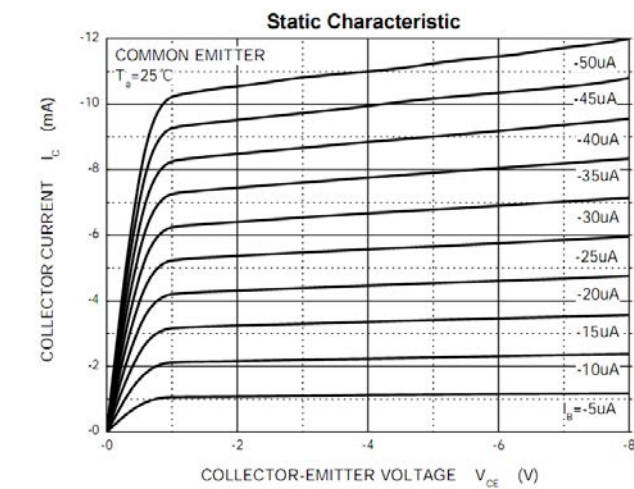
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu A, I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CE} = -60V, I_E = 0$			-0.1	μA
Emitter-base breakdown voltage	I_{EBO}	$V_{EB} = -6V, I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -6V, I_C = -1mA$	120		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50mA, I_B = -5mA$			-0.25	V
Collector output capacitance	C_{ob}	$V_{CB} = -12V, I_E = 0, f = 1MHz$		4	5	pF
Transition frequency	f_T	$V_{CE} = -12V, I_C = -2mA, f = 30MHz$		140		MHz

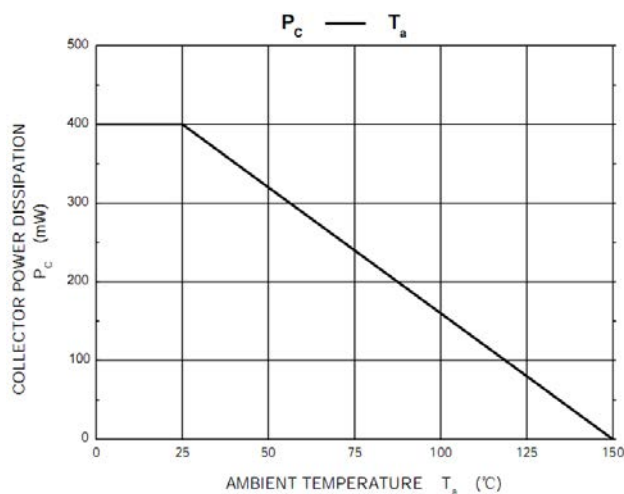
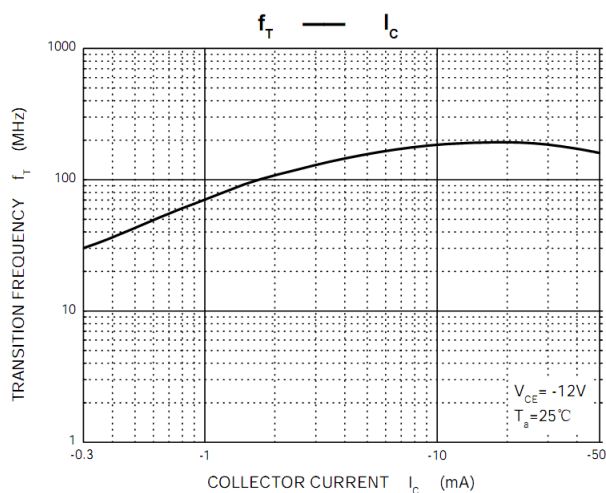
Classification Of hFE

Rank	2SA1037AKT146Q	2SA1037AKT146R	2SA1037AKT146S
Range	120-270	180-390	270-560
Marking	FQ	FR	FS

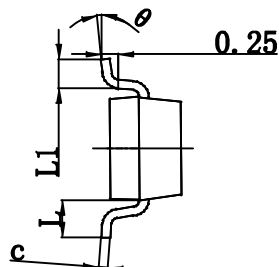
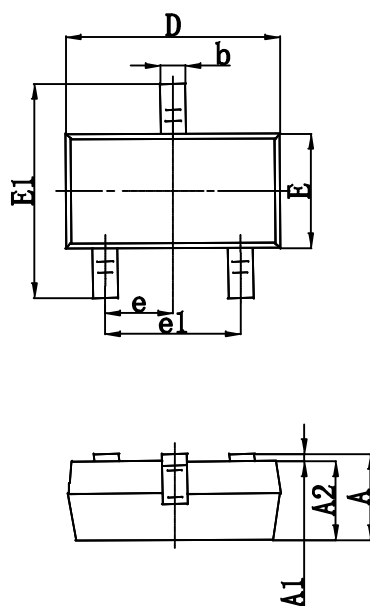


Typical Characteristics





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°



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