



PNP TRANSISTOR

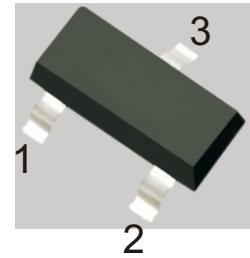
FEATURES

- High voltage and high current
- Excellent h_{FE} Linearity

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

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	-50	V
Collector-Emitter Voltage	V_{CE0}	-50	V
Emitter-Base Voltage	V_{EB0}	-5	V
Collector Current — Continuous	I_C	-150	mA
Collector Power Dissipation	P_D	200	mW
Thermal Resistance, junction to Ambient	R_{thJA}	625	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

SOT-23



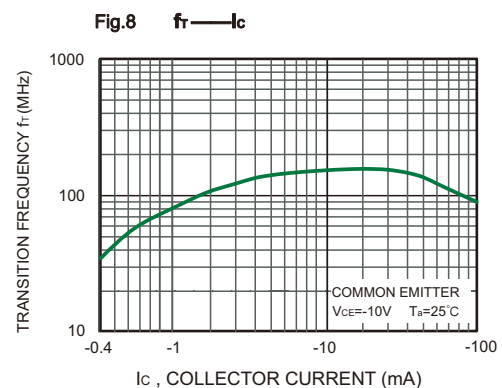
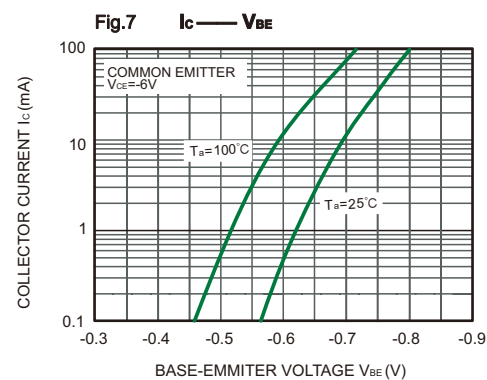
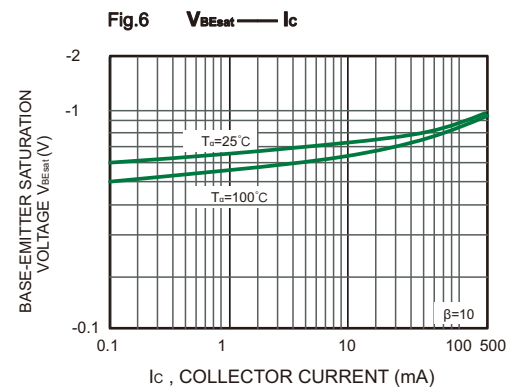
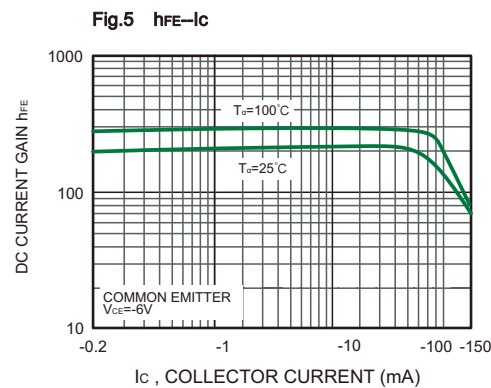
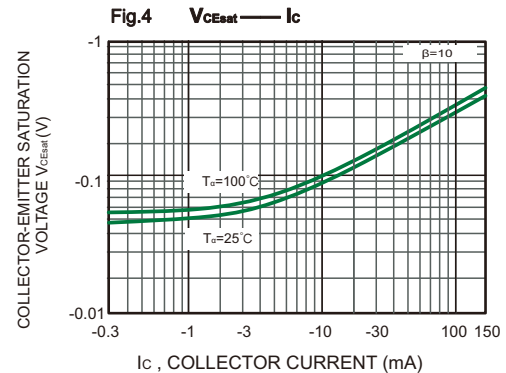
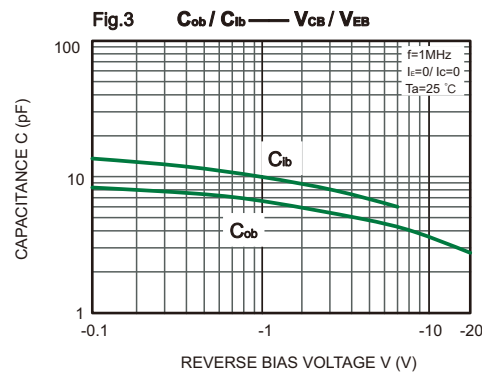
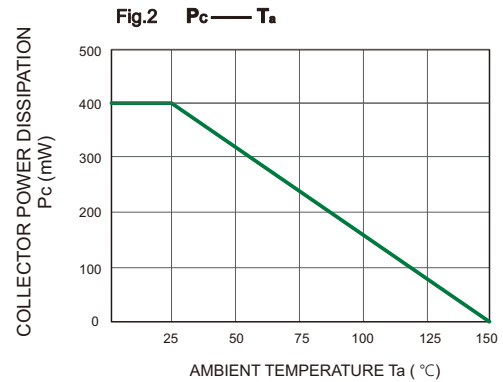
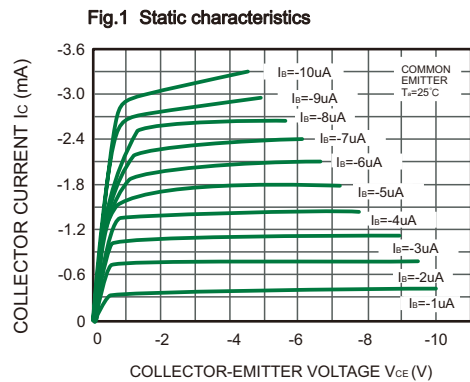
1.BASE
2.EMITTER
3.COLLECTOR

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -0.1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -50V, I_E = 0$			-0.1	μA
Collector cut-off current	I_{CEO}	$V_{CB} = -50V, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -6V, I_C = -2mA$	130		400	
	$h_{FE(2)}$	$V_{CE} = -6V, I_C = -0.2mA$	70			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100mA, I_B = -10mA$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100mA, I_B = -10mA$			-1.1	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -1mA$ $f = 30MHz$	80			MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0$ $f = 1MHz$			7	pF
Noise Figure	NF	$V_{CE} = -6V, I_C = -0.1mA$ $R_g = 10k\Omega, f = 1kHz$			6	dB

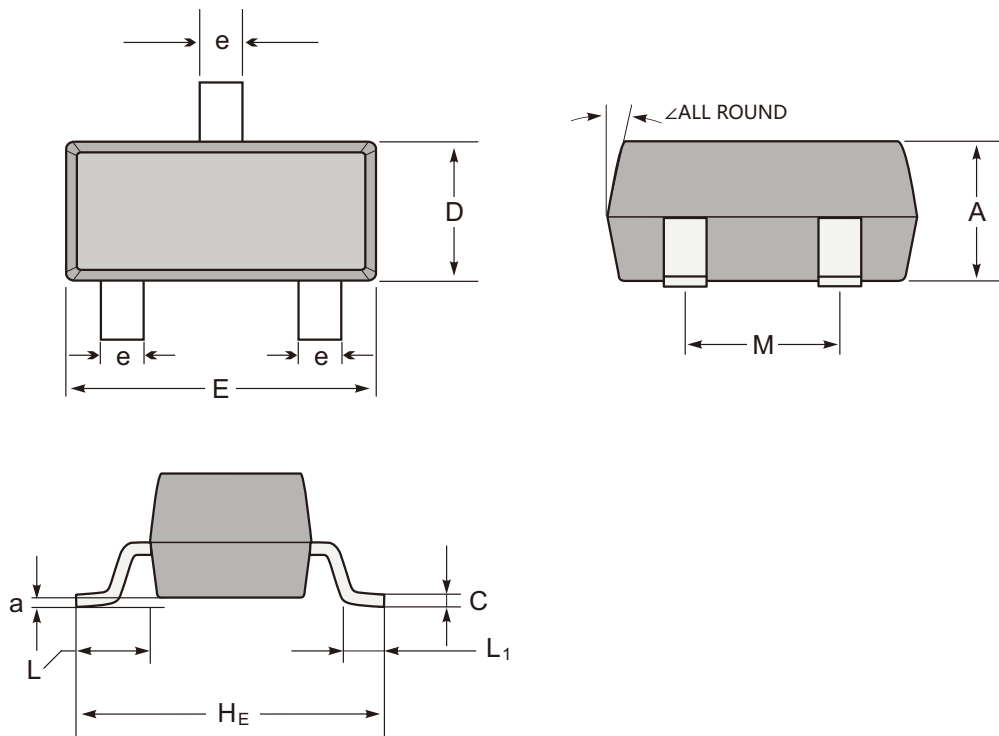


TYPICAL CHARACTERISTICS





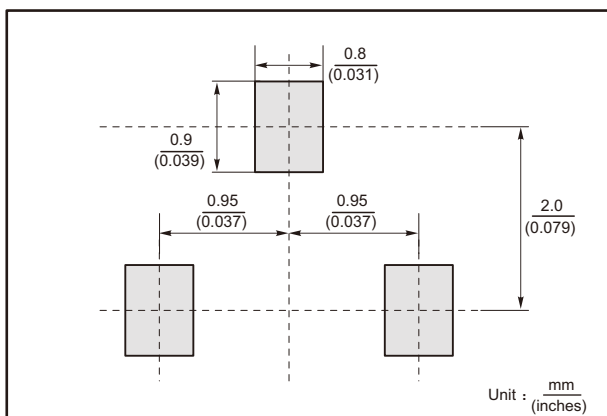
SOT-23 Package Outline Dimensions



SOT-23 mechanical data

UNIT		A	C	D	E	HE	e	M	L	L ₁	a	∠
mm	max	1.1	0.20	1.4	3.0	2.6	0.6	1.95	0.55 (ref)	0.36 (ref)	0.15	12°
	min	0.9	0.08	1.2	2.8	2.2	0.35	1.7			0.0	
mil	max	43	7.9	55	118	102	24	77	22 (ref)	14 (ref)	6	
	min	35	3.1	47	110	87	13	67			0.0	

The recommended mounting pad size



Marking

Type number	Marking code
2SA1015	BA