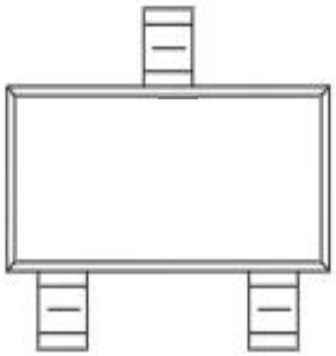
2SC3356

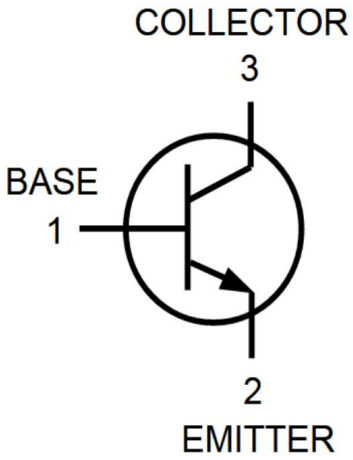
SOT-23 Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

MARKING:



Equivalent Circuit:



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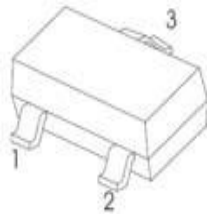

1.BASE
2.EMITTER
3.COLLECTOR

FEATURES:

※ Low noise and high gain.
NF = 1.1 dB Typ., Ga = 11 dB Typ. @VCE = 10 V, IC = 7 mA, f = 1.0 GHz

※ High power gain.
MAG = 13 dB Typ. @VCE = 10 V, IC = 20 mA, f = 1.0 GHz

ABSOLUTE MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	20	V
Collector-Emitter Voltage	VCEO	12	V
Emitter-Base Voltage	VEBO	3	V
Collector Current	IC	100	mA
Collector Power Dissipation	PC	250	mW
Thermal Resistance From Junction To Ambient	RΘJA	200	℃/W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55～+150	℃

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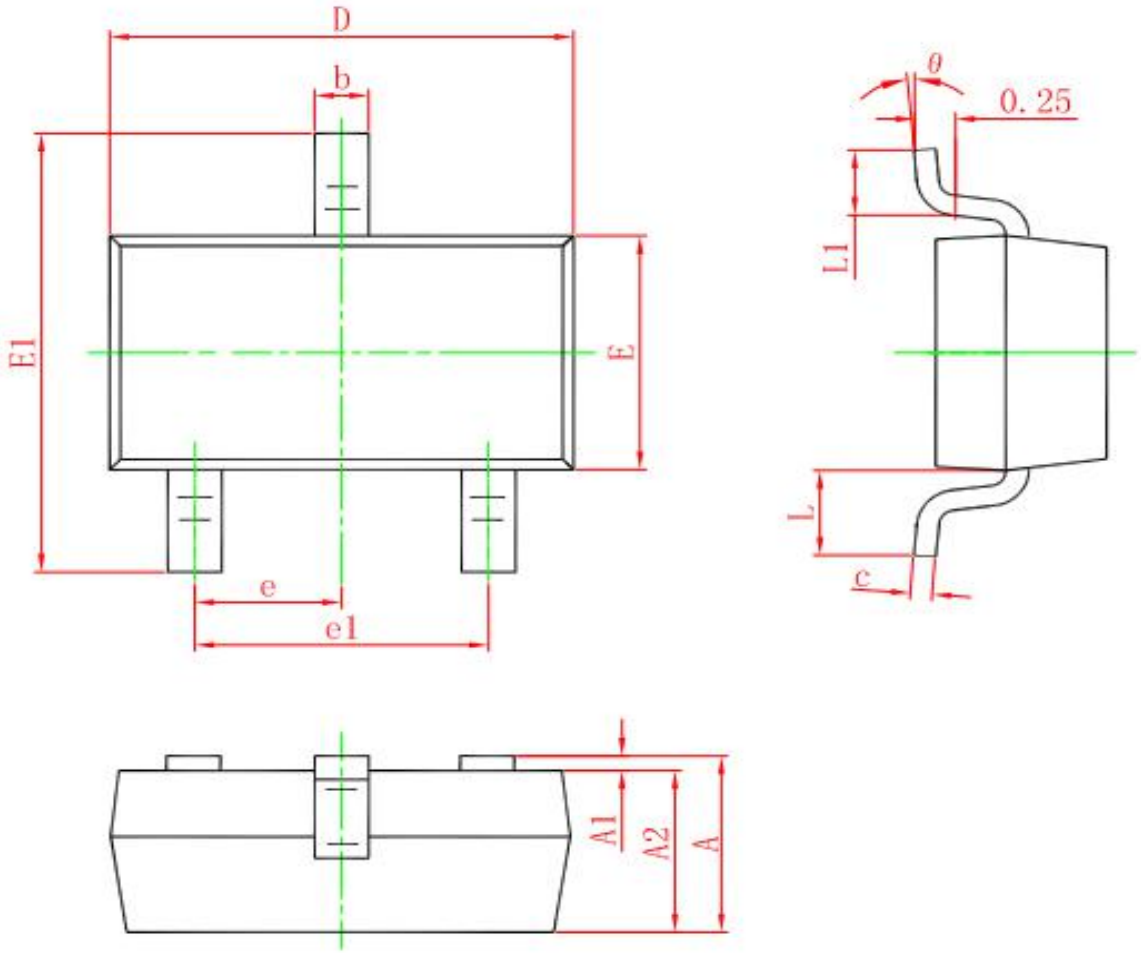
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= 10μA, IE=0	20			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	12			V
Emitter-base breakdown voltage	V(BR)EBO	IE= 10μA, IC=0	3			V
Collector cut-off current	ICBO	VCB= 10 V , IE=0			1	μA
Emitter cut-off current	IEBO	VEB= 1V , IC=0			1	μA
DC current gain	hFE	VCE= 10V, IC= 20mA	50	120	250	
Collector-emitter saturation voltage	VCE(sat)	IC= 10 mA, IB= 1mA			0.5	V
Base-emitter saturation voltage	VBE(sat)	IC= 10 mA, IB= 1mA			1.2	V
Transition frequency	fT	VCE=10V, IC= 20mA f=1MHz,		7		GHz
Reverse transfer capacitance	Cre	VCB = 10 V, IE = 0 mA, f = 1 MHz		0.55	1	PF
Insertion power gain	S21e 2	VCE = 10 V, IC = 20 mA, f = 1 GHz		11.5		dB
Noise figure	NF	VCE = 10 V, IC = 7 mA, f = 1 GHz		1.1	2.0	dB

CLASSIFICATION OF hFE

Rank	Q	R	S
Range	50-100	80-160	125-250
MARKING	R23	R24	R25

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°