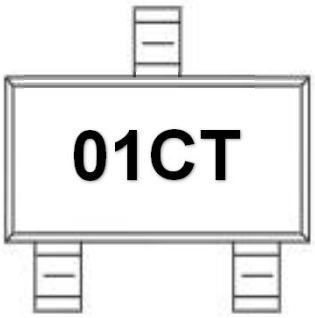
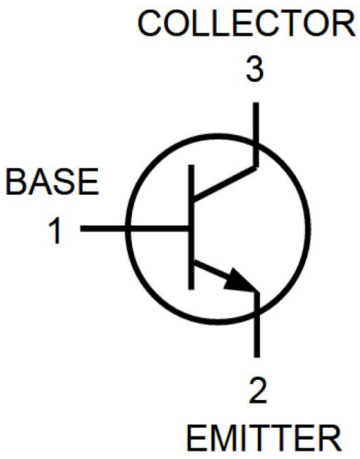
TRANSI STOR (NPN)

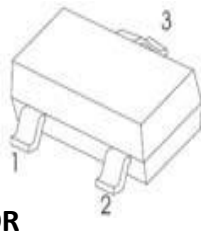
MARKING:



Equivalent Circuit:



SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

FEATURES:

- Power switching applications

MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	700	V
Collector-Emitter Voltage	VCEO	450	V
Emitter-Base Voltage	VEBO	8	V
Collector Current	IC	200	mA
Collector Power Dissipation	PC	625	mW
Thermal Resistance From Junction To Ambient	RΘJA	416	℃/W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55～+150	℃

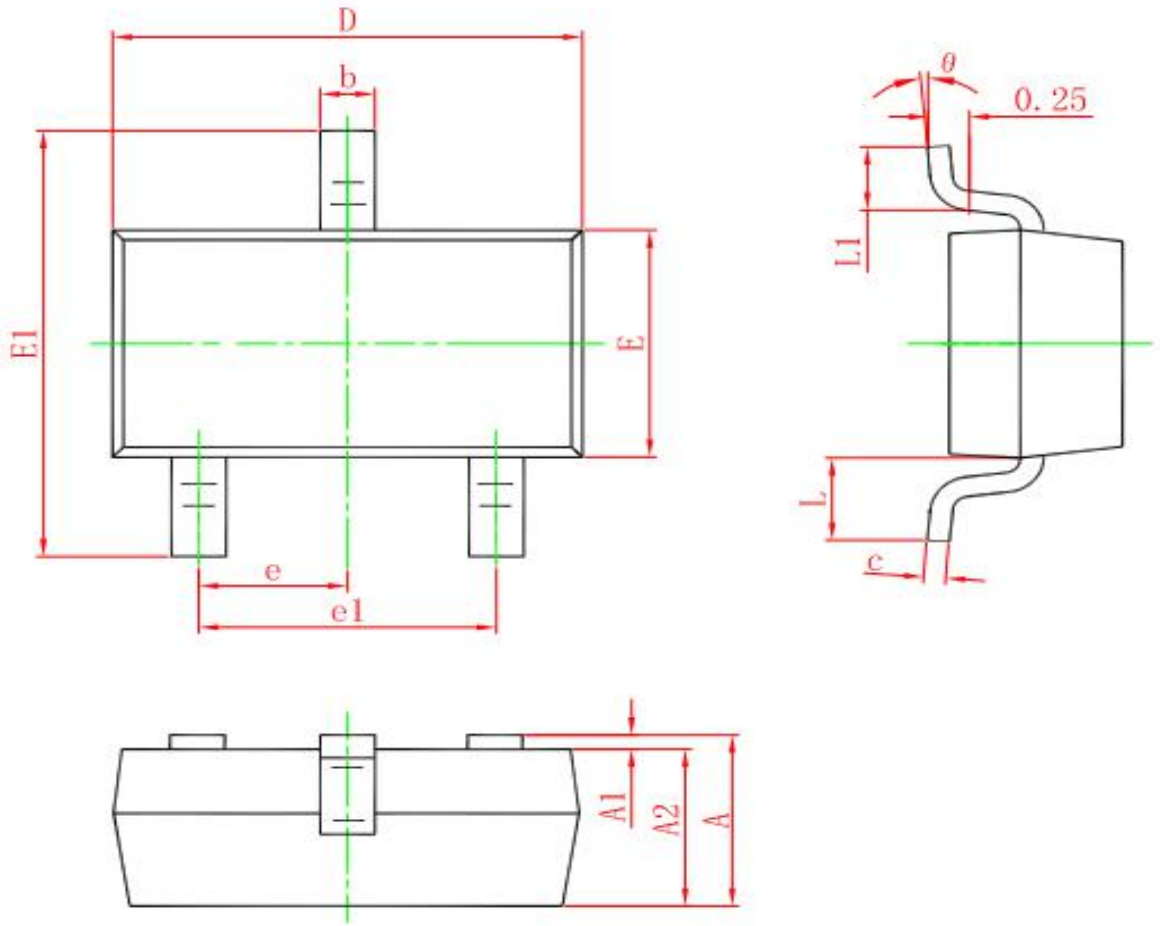
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specifie

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= 1mA, IE=0	700			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	450			V
Emitter-base breakdown voltage	V(BR)EBO	IE= 0.1mA, IC=0	8			V
Collector cut-off current	ICBO	VCB= 600 V , IE=0			100	μA
Collector cut-off current	ICEO	VCB= 400V , IE=0			100	μA
Emitter cut-off current	IEBO	VEB= 7V , IC=0			100	μA
DC current gain	hFE	VCE=20V, IC= 20mA	14		30	
	hFE	VCE=10V, IC= 0.25mA	5			
	hFE	VCE=5V, IC= 500mA	1			
Collector-emitter saturation voltage	VCE(sat)	IC=50 mA, IB= 10mA			0.4	V
Base-emitter saturation voltage	VBE(sat)	IC=50 mA, IB= 10mA			1.1	V
Transition frequency	fT	VCE=20V, IC= 20mA f=100MHz	8			MHz
Collector Current Capacitance	Cod	VCB= 10V, IE=0, f=1MHz			6	pF
Rail time	tr	IC= 0.1 A			0.9	μs
Storage time	ts	IC= 0.1 A	1.7		2.9	μs

CLASSIFICATION OF hFE

Range	14-17	17-20	20-23	23-26	26-30

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°