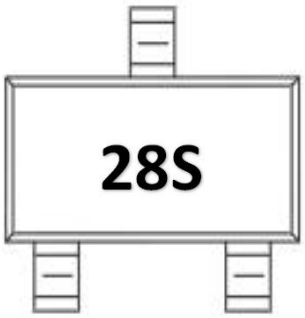
TSDM28S

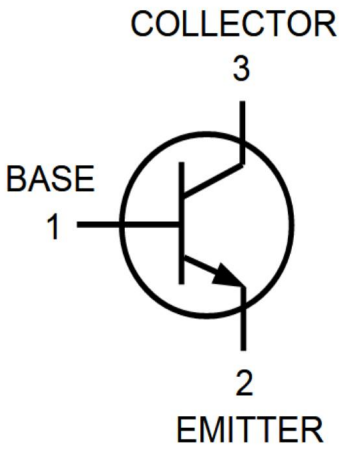
SOT-23 Plastic-Encapsulate Transistors

TRANSI STOR (NPN)

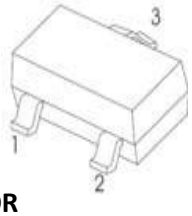
MARKING:



Equivalent Circuit:



SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

FEATURES:

※ Excellent Linearity
※ High DC Current Gain

MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	40	V
Collector-Emitter Voltage	VCEO	20	V
Emitter-Base Voltage	VEBO	6	V
Collector Current	IC	1	A
Collector Power Dissipation	PC	200	mW
Thermal Resistance From Junction To Ambient	RΘJA	625	℃/W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55～+150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

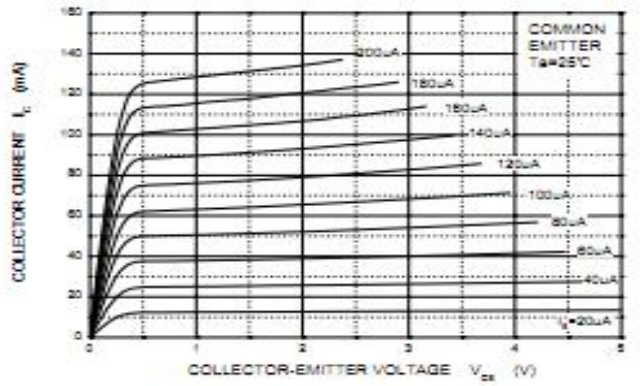
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= 100μA, IE=0	40			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	20			V
Emitter-base breakdown voltage	V(BR)EBO	IE=100μA, IC=0	6			V
Collector cut-off current	ICBO	VCB=35 V , IE=0			0.1	μA
Collector cut-off current	ICEO	VCB=20V , IE=0			1	μA
Emitter cut-off current	IEBO	VEB= 5V , IC=0			0.1	μA
DC current gain	hFE	VCE=1V, IC= 1mA	290			
	hFE	VCE=1V, IC= 100mA	300		1000	
Collector-emitter saturation voltage	VCE(sat)	IC=600 mA, IB= 20mA			0.55	V
Base-emitter saturation voltage	VBE(sat)	IC=600 mA, IB= 20mA			1.6	V
Transition frequency	fT	VCE=2V, IC= 10mA f=100MHz	100			MHz
Collector Output Capacitance	Cob	VCB=-10V, IE= 0 f=1MHz		9		pf

CLASSIFICATION OF hFE

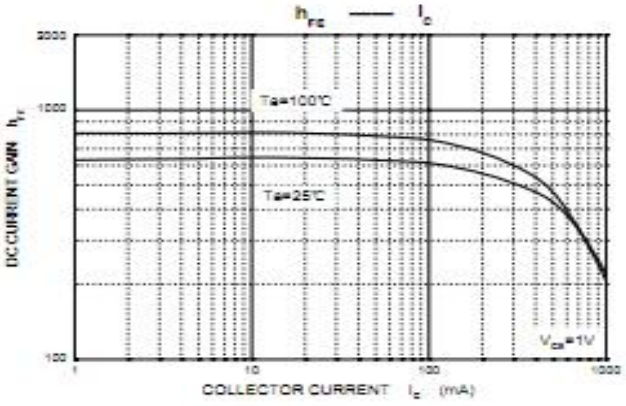
Rank	B	C	D
Range	300-550	500-700	650-1000

TYPICAL ELEC TRICAL AND THERMAL CHARACTERISTICS

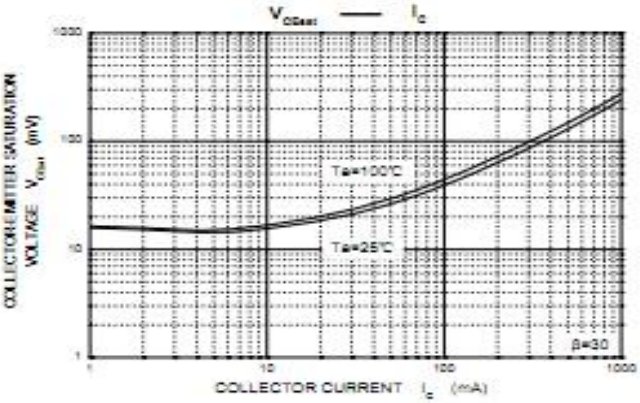
Static Characteristic



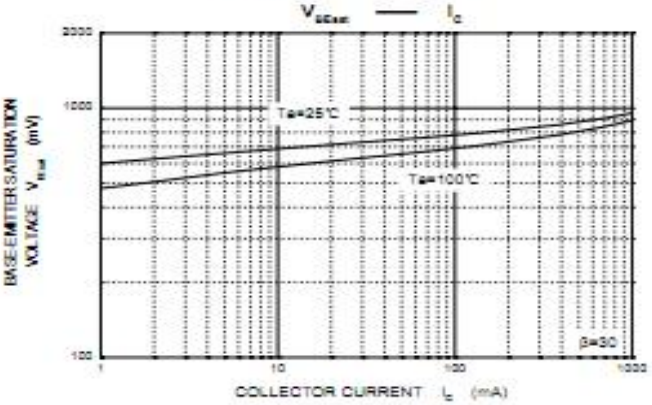
h_{FE} —— I_C



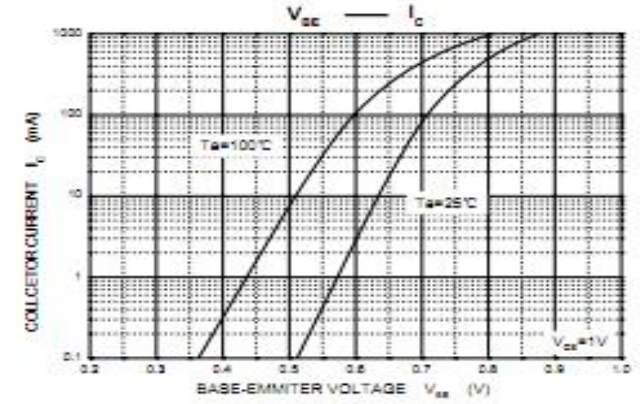
$V_{CE(sat)}$ —— I_C



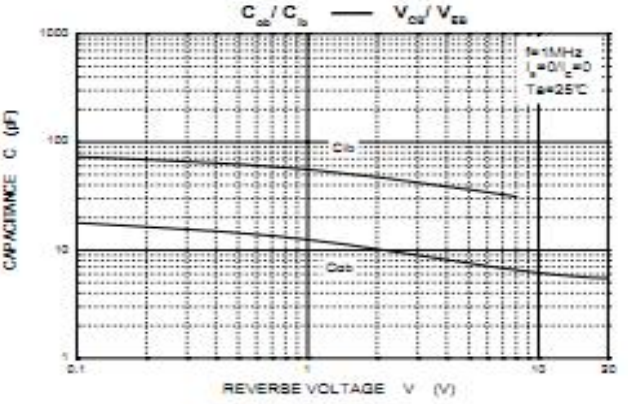
$V_{BE(sat)}$ —— I_C



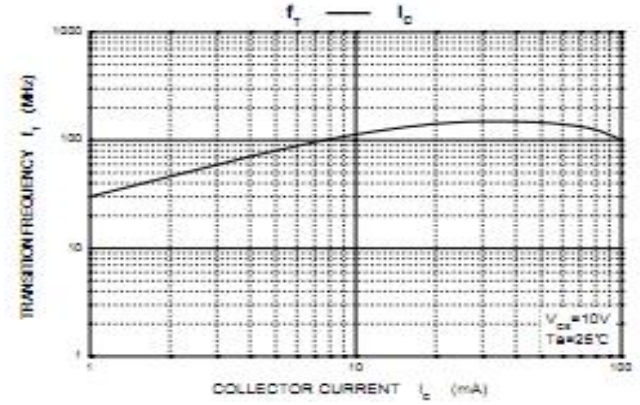
V_{BE} —— I_C



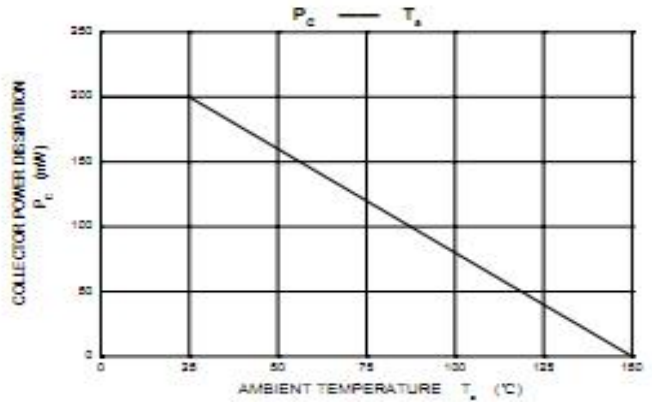
C_{ob} / C_{ib} —— V_{CB} / V_{EB}



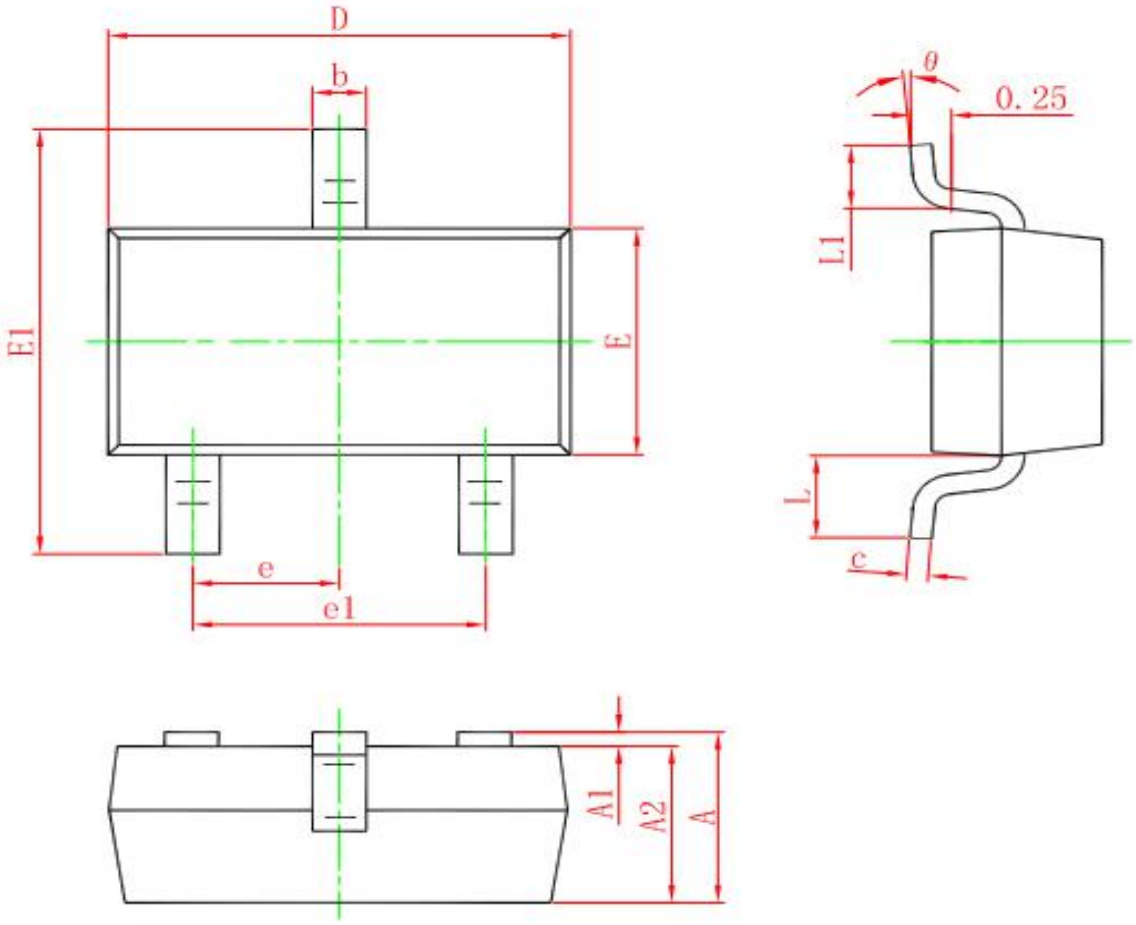
f_T —— I_C



P_C —— T_a



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°