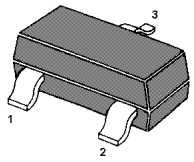
迈拓电子
MAITUO ELECTRONIC

MMBT4401W TRANSISTOR(NPN)

COLLECTOR



BASE

EMITTER

FEATURES

Switching transistor

MARKING: 2X

SOT-323

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	600	mA
P_C	Collector Power dissipation	0.3	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55to +150	℃
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	357	℃/W

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 100μA, I_E=0	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 1mA, I_B=0	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= 100μA, I_C=0	6		V
Collector cut-off current	I_{CBO}	V_{CB}=50 V, I_E=0		0.1	μA
Collector cut-off current	I_{CEO}	V_{CE}=30 V, I_B=0		0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0		0.1	μA
DC current gain	h_{FE}	V_{CE}=1V, I_C=150mA	100	300	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=150mA, $_B$=15mA		0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C= 150mA, I_B=15mA		0.95	V
Transition frequency	f_T	V_{CE}= 10V, I_C= 20mA f = 100MHz	250		MHz

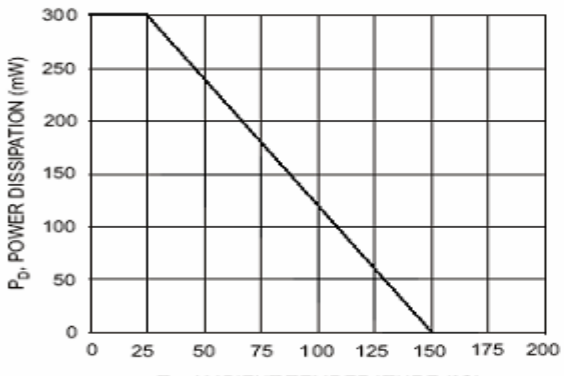


Fig. 1 Max Power Dissipation vs Ambient Temperature

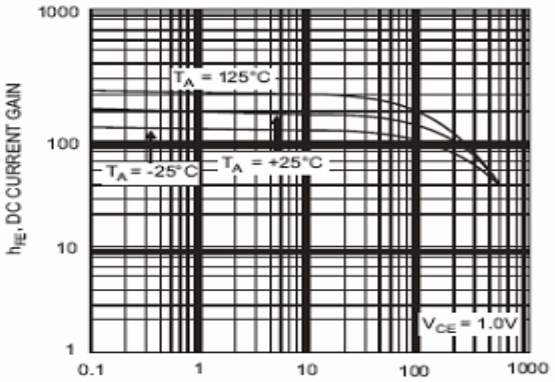


Fig. 2 Typical DC Current Gain vs Collector Current

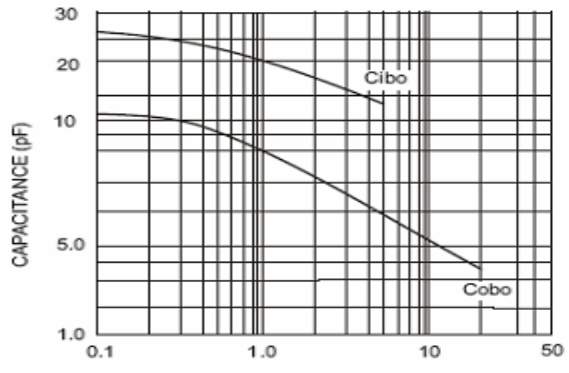


Fig. 3 Typical Capacitance

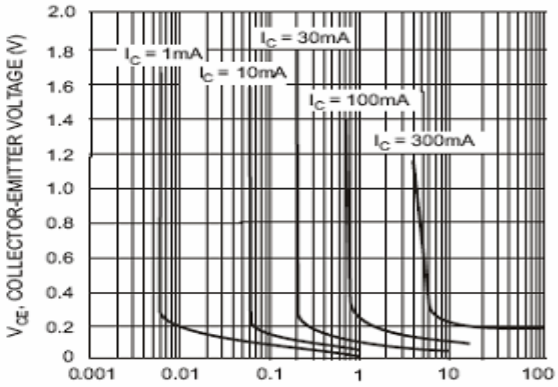


Fig. 4 Typical Collector Saturation Region

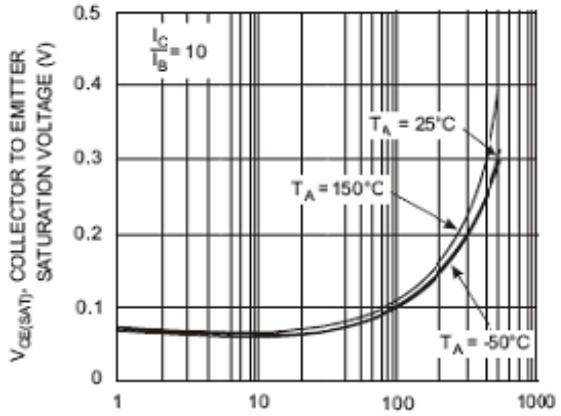


Fig. 5 Collector Emitter Saturation Voltage vs. Collecor Current

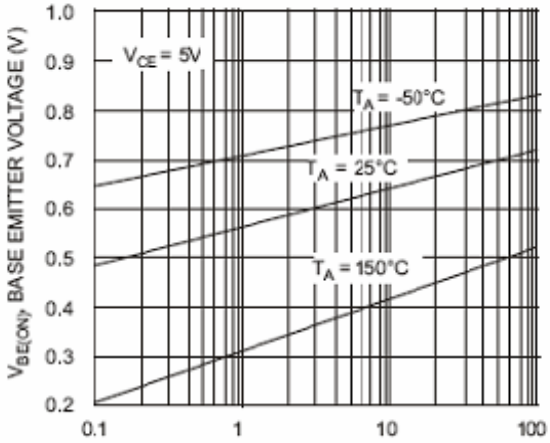
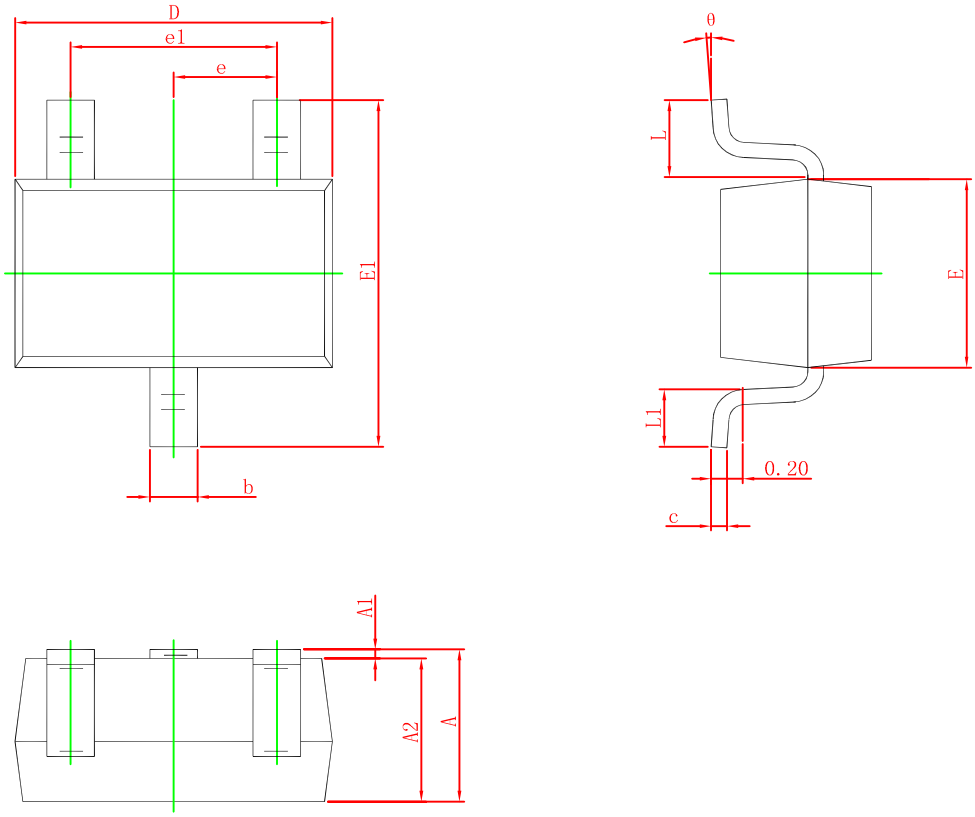


Fig. 6 Base Emitter Voltage vs. Collector Current

迈拓电子
MAITUO ELECTRONIC

SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°