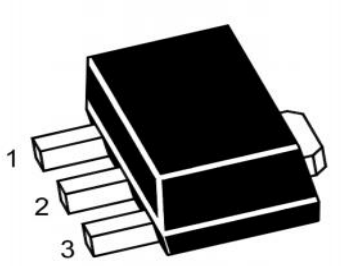
迈拓电子
MAITUO ELECTRONIC

2SD2150 TRANSISTOR (NPN)



1.Base 2.Collector 3.Emitter

SOT-89-3L

FEATURES

- Excellent current-to-gain characteristics
- Low collector saturation voltage $V_{CE(sat)}$
  $V_{CE(sat)}$=0.5V(max) for I_C/I_B=2A/0.1A

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Power Dissipation	500	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C =50uA, I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C =1mA, I_B=0	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=50μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=30V, 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} *	V_{CE}=2V, I_C=100mA	180		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	I_C=2A, I_B=100mA			0.5	V
Transition frequency	f_T*	V_{CE}=2V,I_C=500mA f=100MHz		290		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		25		pF

***Pulse test: t_p≤300μS, δ≤0.02.**

CLASSIFICATION OF h_{FE}

Rank	R	S
Range	180-390	270-560
Marking	CFR	CFS

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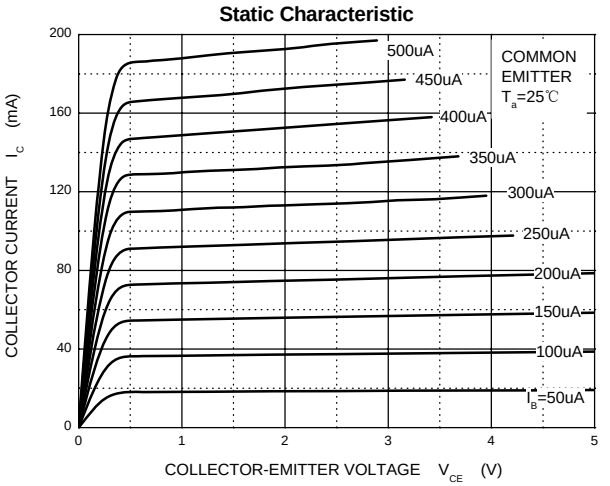

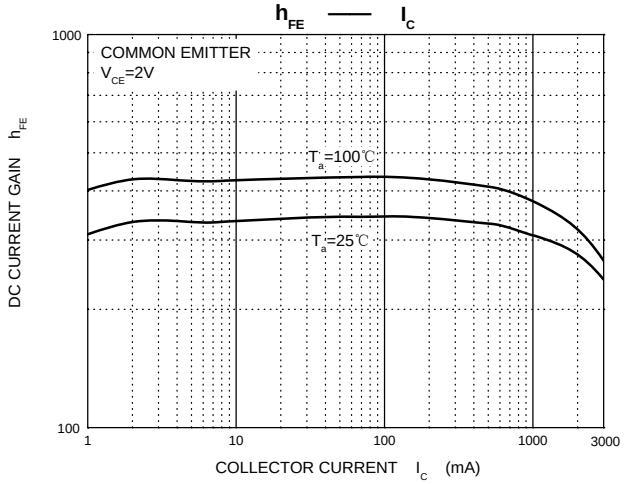

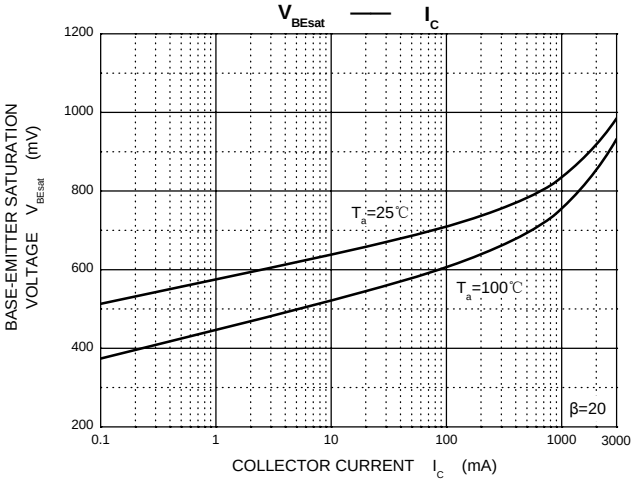

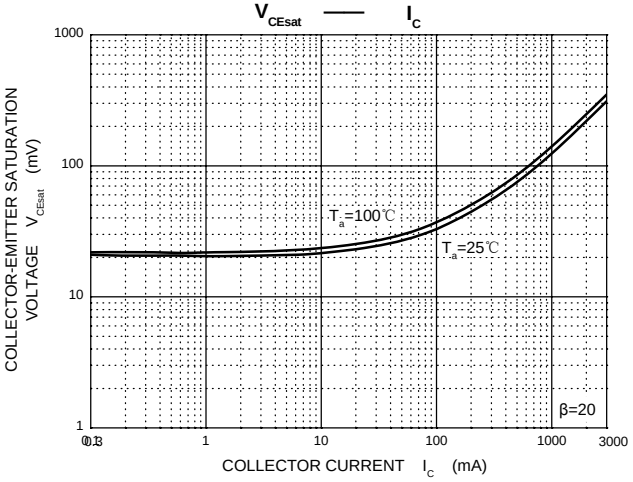

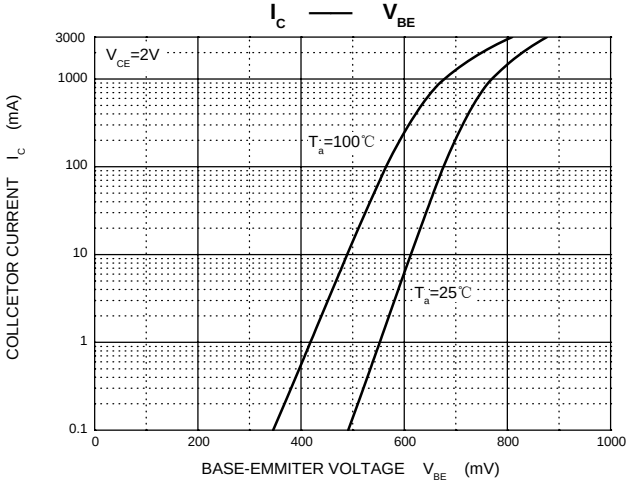

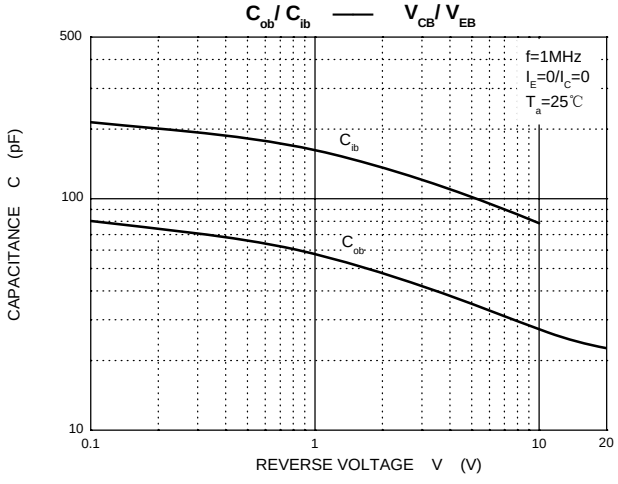

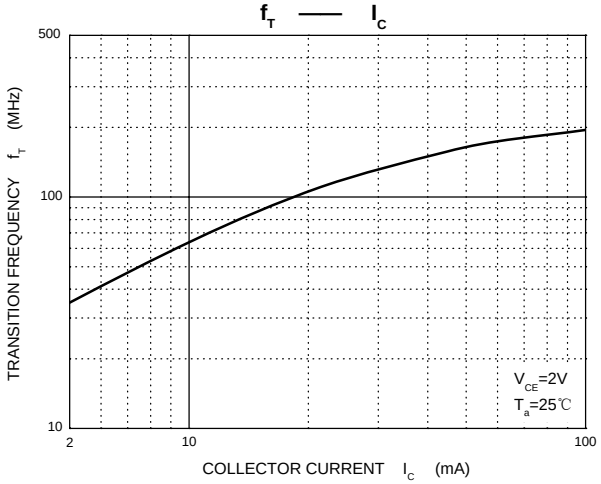

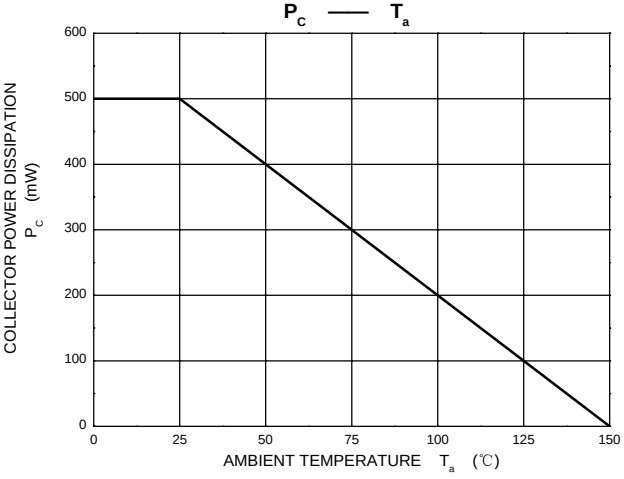

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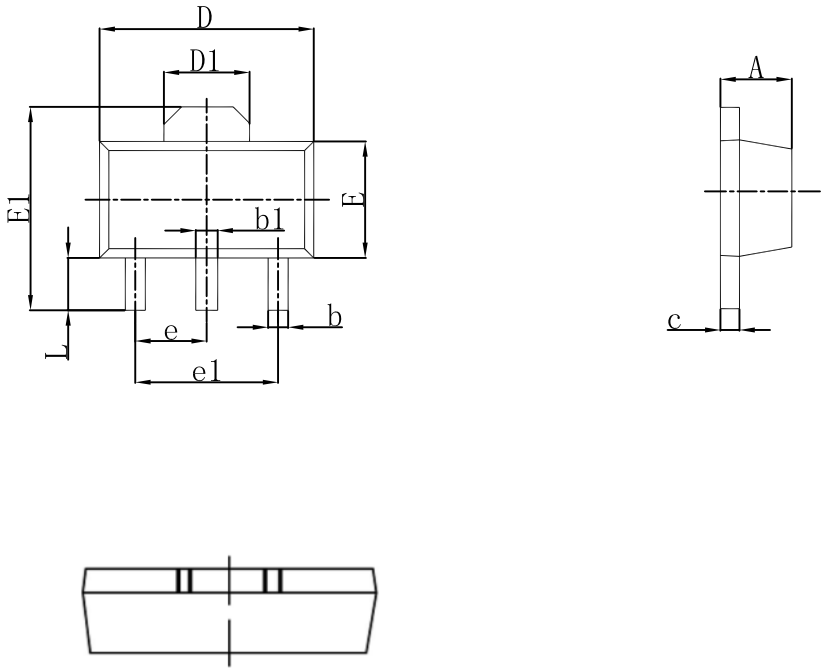
SOT-89-3L Outlines Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047