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TRANSISTOR (NPN)

FEATURES

- Low Collector-Emitter Saturation Voltage
- Large Collector Power Dissipation and Current
- Mini Power Type Package

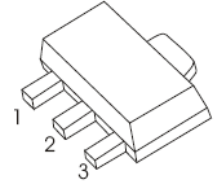
MARKING : D965

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	42	V
V _{CEO}	Collector-Emitter Voltage	22	V
V _{EBO}	Emitter-Base Voltage	7.5	V
I _{CM}	Collector Current	5	A
P _C	Collector Power Dissipation	750	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	167	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

SOT-89

1. BASE
2. COLLECTOR
3. EMITTER

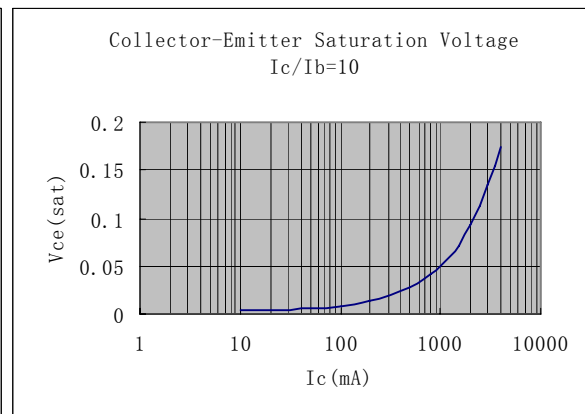
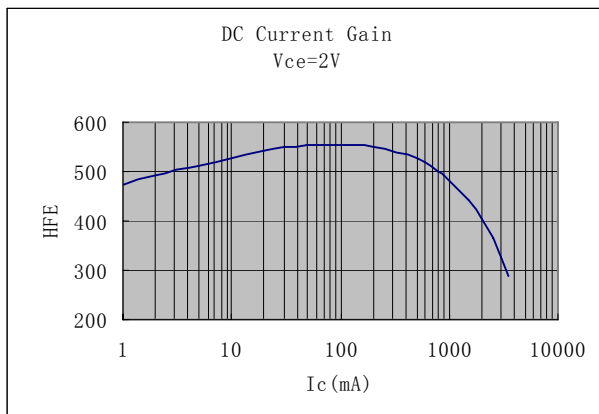


ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

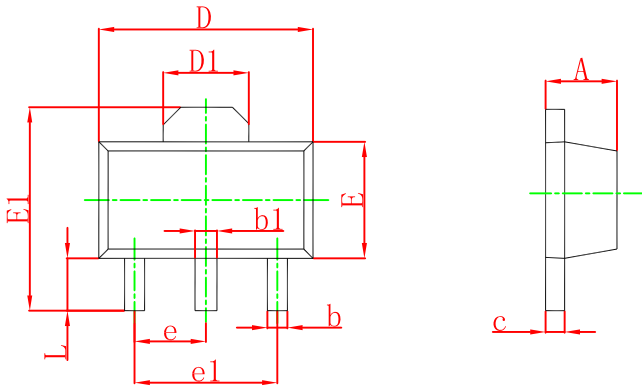
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	20			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =10μA, I _C =0	7			V
Collector cut-off current	I _{CBO}	V _{CB} =10V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =7V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =2V, I _C =1mA		200		
	h _{FE(2)}	V _{CE} =2V, I _C =500mA	340		1000	
	h _{FE(3)}	V _{CE} =2V, I _C =2A	150			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =3A, I _B =0.1A			1	V
Transition frequency	f _T	V _{CE} =6V, I _C =50mA, f=200MHz		150		MHz
Collector output capacitance	C _{ob}	V _{CB} =20V, I _E =0, f=1MHz			50	pF

CLASSIFICATION OF $h_{FE(2)}$

RANK	R	S
RANGE	340 - 600	560 - 1000

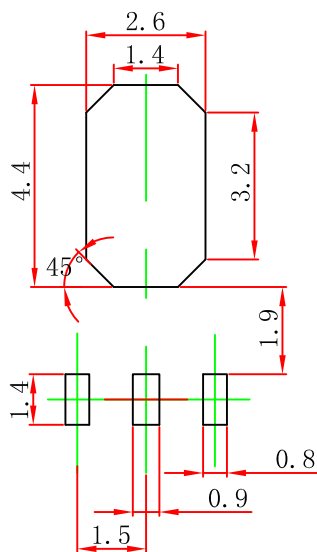


SOT-89 Package Outline Dimensions



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

SOT-89 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

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