



SOT-89-3L Plastic-Encapsulate Transistors

2SD965 TRANSISTOR (NPN)

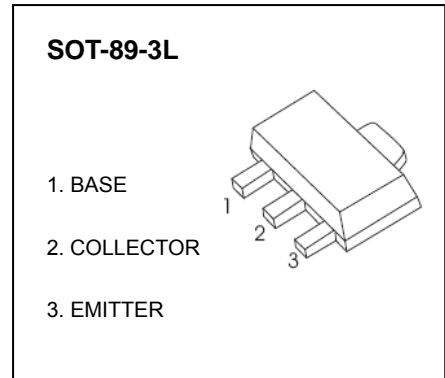
FEATURES

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

A5F?B; : 965

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	40	V
V _{CE0}	Collector-Emitter Voltage	20	V
V _{EBO}	Emitter-Base Voltage	7	V
I _C	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



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 _{CB0}	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	230		800	
	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	Q	R	S
RANGE	230 - 380	340 - 600	560 - 800

Typical Characteristics

2SD965

