

Features

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



SOT-89-3L

Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EB0}	Emitter-Base Voltage	7	V
I_C	Collector Current	5	A
P_C	Collector Power Dissipation	750	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	167	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu\text{A}, I_E=0$	40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1\text{mA}, I_B=0$	20			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu\text{A}, I_C=0$	7			V
I_{CBO}	Collector cut-off current	$V_{CB}=10\text{V}, I_E=0$			0.1	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=7\text{V}, I_C=0$			0.1	μA
$h_{FE(1)}$	DC current gain	$V_{CE}=2\text{V}, I_C=1\text{mA}$		200		
$h_{FE(2)}$		$V_{CE}=2\text{V}, I_C=500\text{mA}$	230		800	
$h_{FE(3)}$		$V_{CE}=2\text{V}, I_C=2\text{A}$	150			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=3\text{A}, I_B=0.1\text{A}$			1	V
f_T	Transition frequency	$V_{CE}=6\text{V}, I_C=50\text{mA}, f=200\text{MHz}$		150		MHz
C_{ob}	Collector output capacitance	$V_{CB}=20\text{V}, I_E=0, f=1\text{MHz}$			50	pF

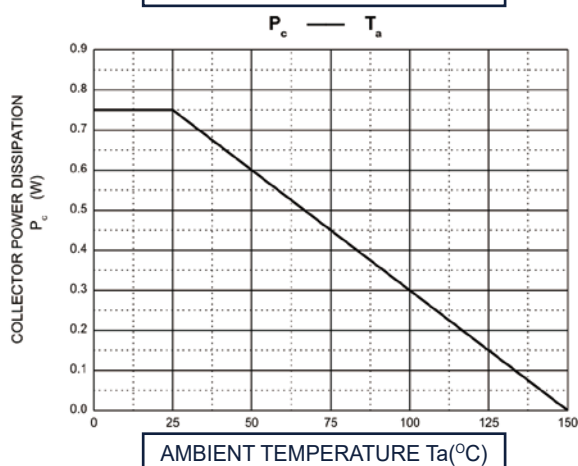
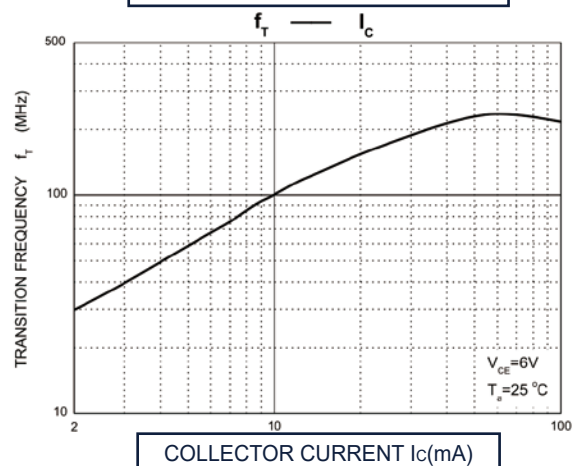
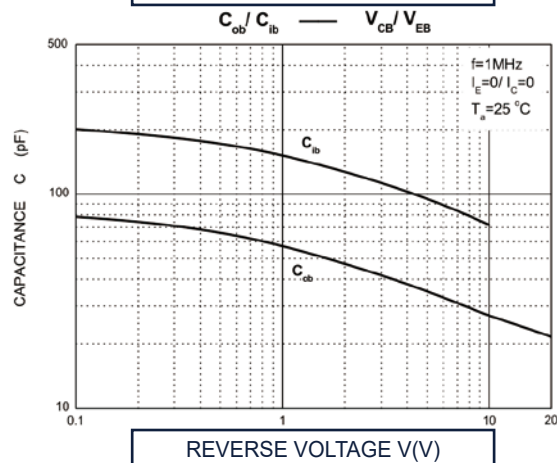
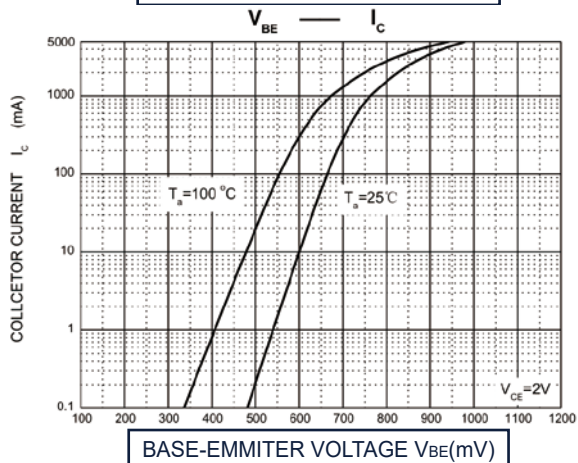
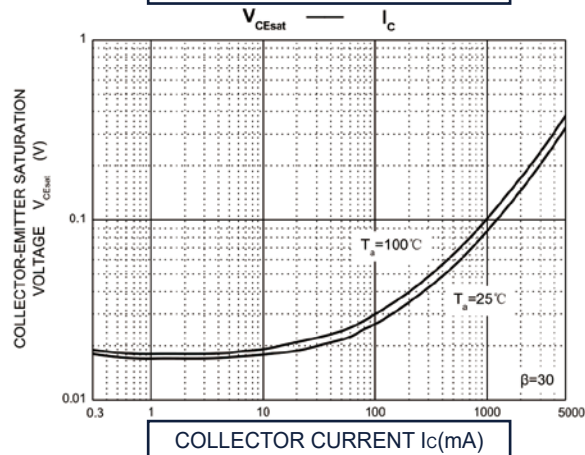
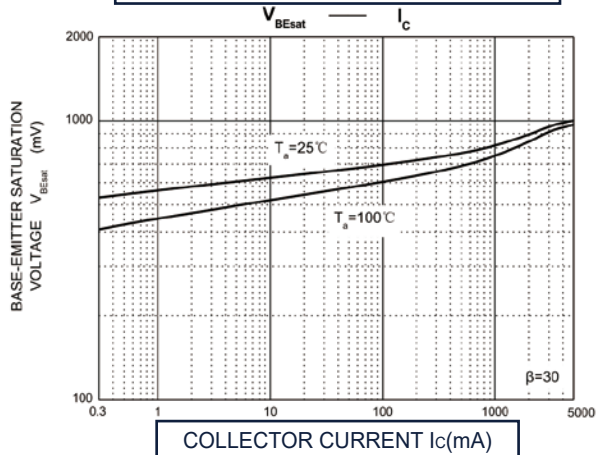
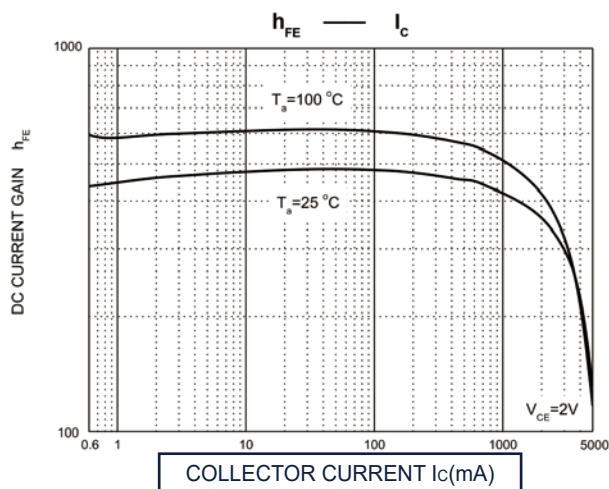
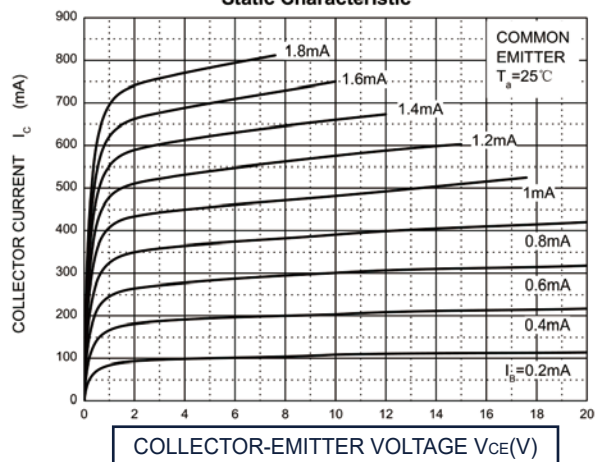
Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE(1)}$	Qty(PCS)
2SD965	SOT-89-3L	2SD965 ↓ 产品名称 product name	D965	340-600	1000



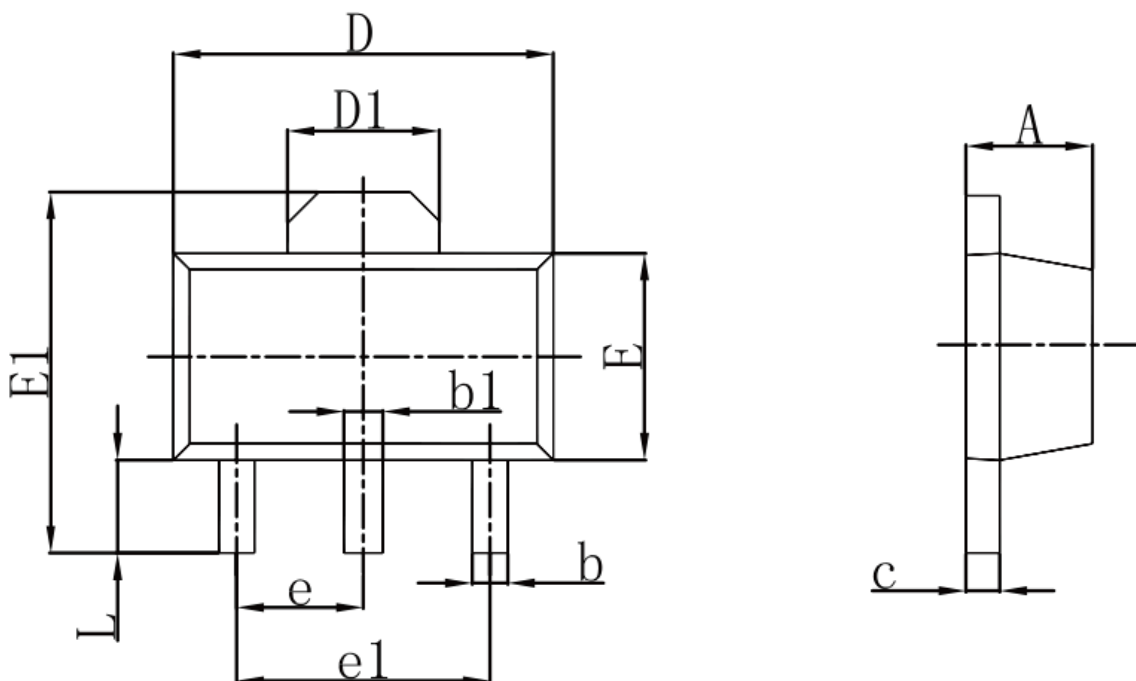
Typical Characteristics

Static Characteristic





SOT-89-3L 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