



SHENZHEN LONG JING MICRO-ELECTRONICS CO., LTD.

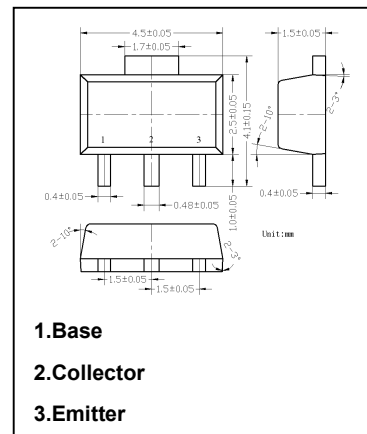
SOT-89 Plastic-Encapsulate Transistors

2SD965 NPN Transistors

Features

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

Marking: D965



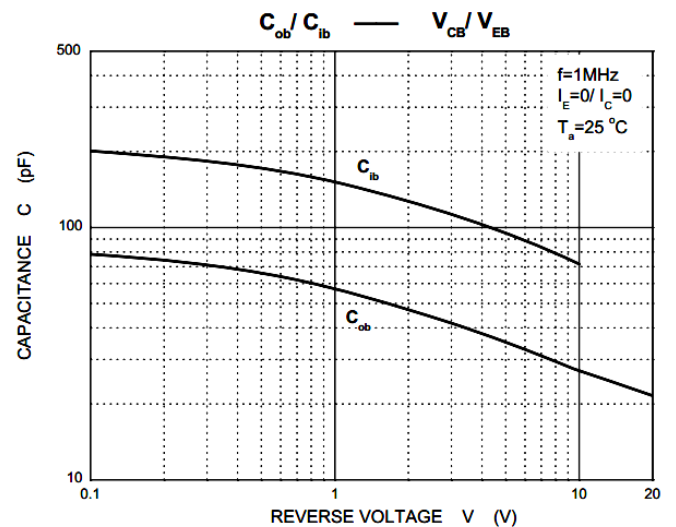
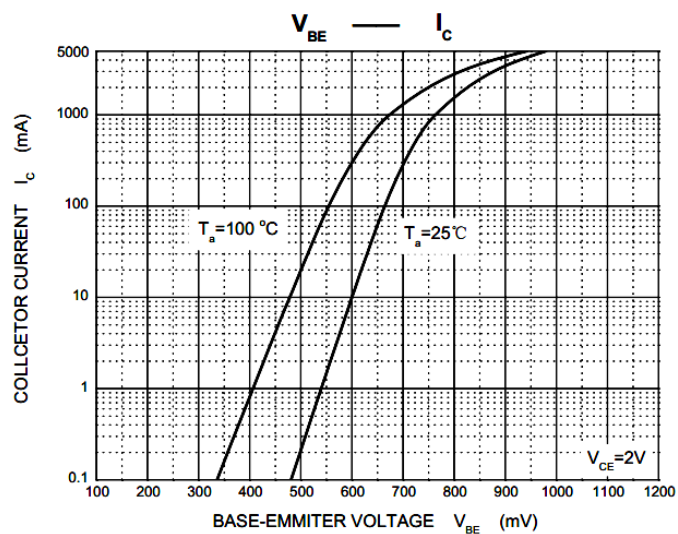
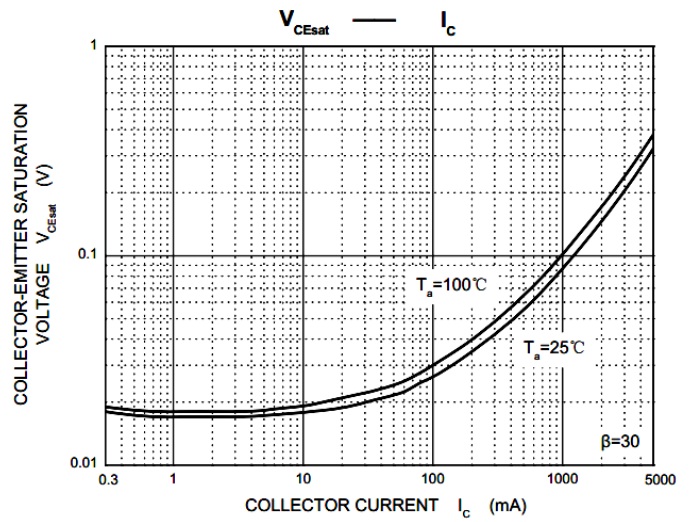
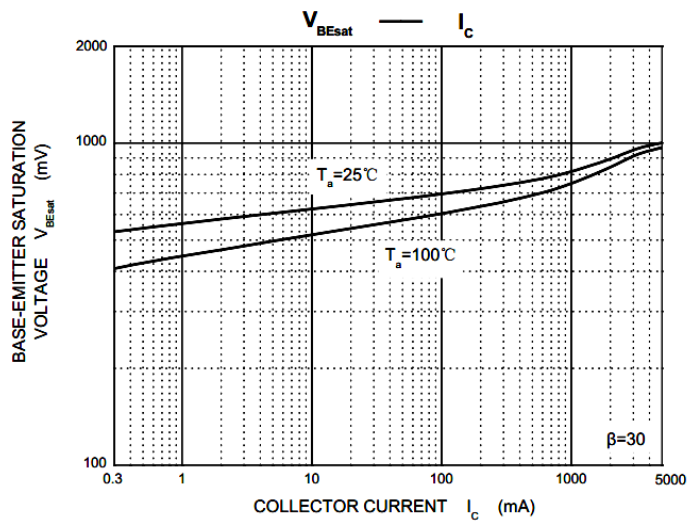
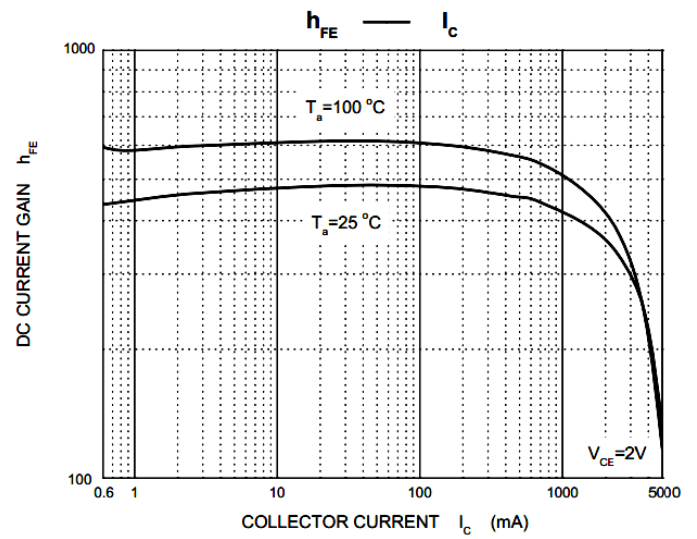
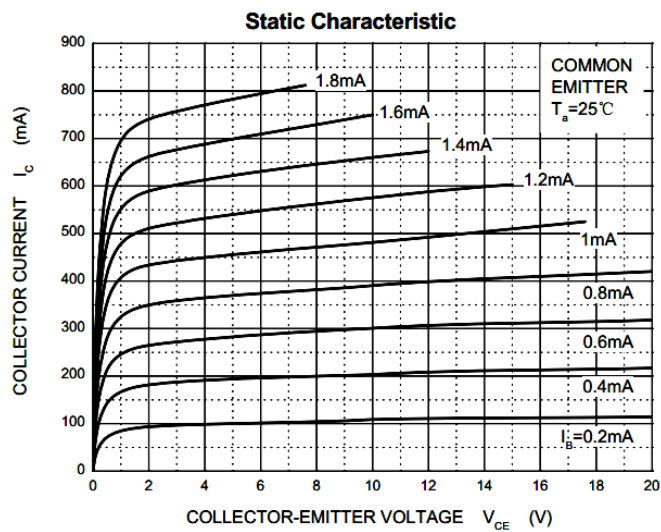
Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CEO}	Collector Emitter Voltage	20	V
V_{CBO}	Collector Base Voltage	40	V
V_{EBO}	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	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	- 55 to +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	$V_{CB}=10\text{V}, I_E=0$			100	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=7\text{V}, I_C=0$			100	nA
$h_{FE(1)}$	DC current gain	$V_{CE}=2\text{V}, I_C=1\text{mA}$		200		
$h_{FE(2)}$		$V_{CE}=2\text{V}, I_C=500\text{mA}$	800		1200	
$h_{FE(3)}$		$V_{CE}=2\text{V}, I_C=2\text{A}$	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

Typical Characteristics



Typical Characteristics

