



## SOT-89-3L Plastic-Encapsulate Transistors

**2SD965** TRANSISTOR (NPN)

### FEATURES

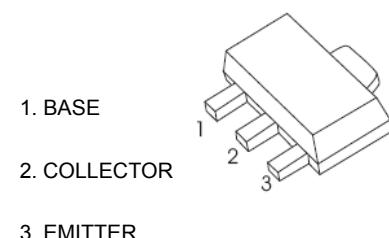
- Low Collector-Emitter Saturation Voltage
- Large Collector Power Dissipation and Current
- Mini Power Type Package

A5 F?B; : 965

### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ 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	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	°C/W
$T_j$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature	-55~+150	°C

### SOT-89-3L



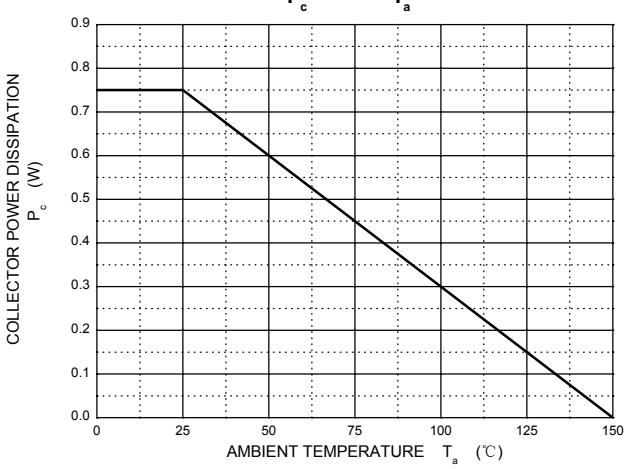
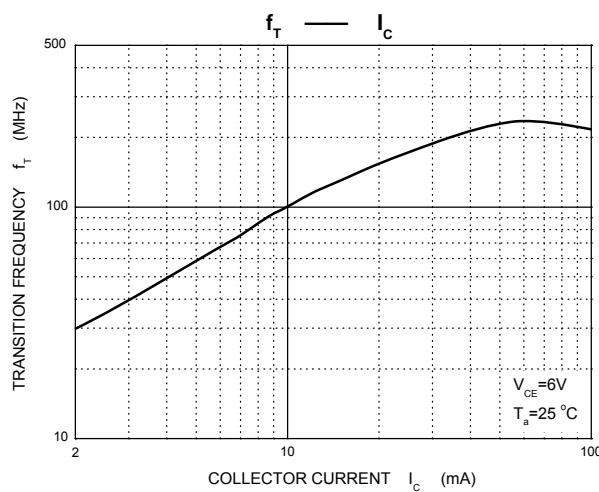
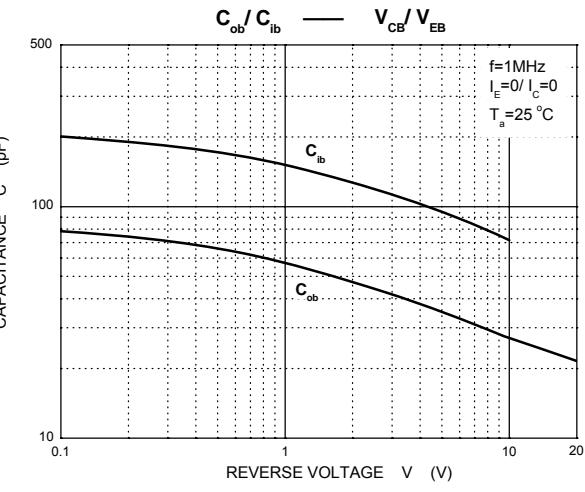
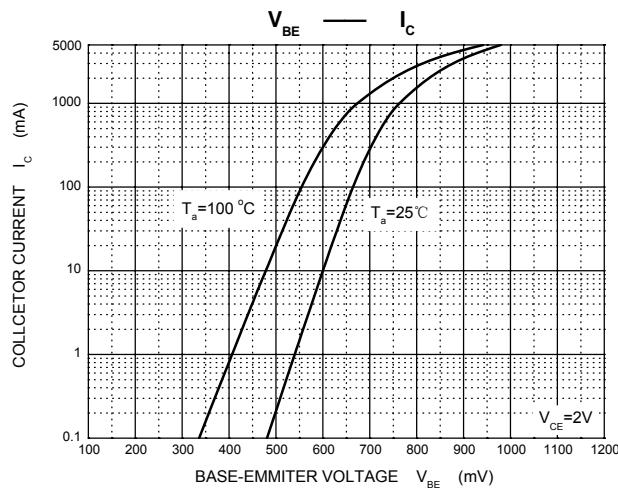
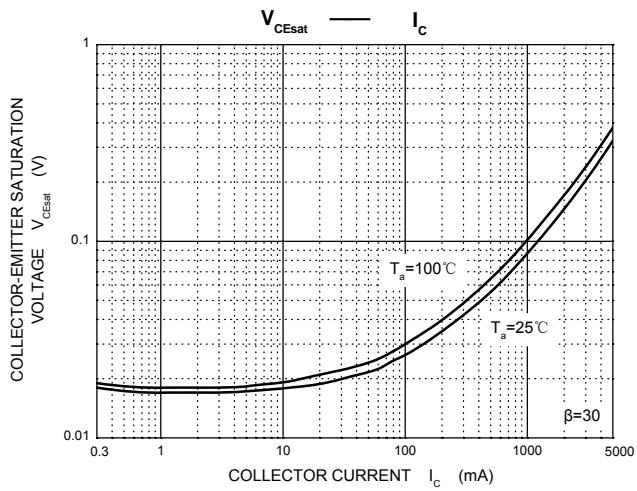
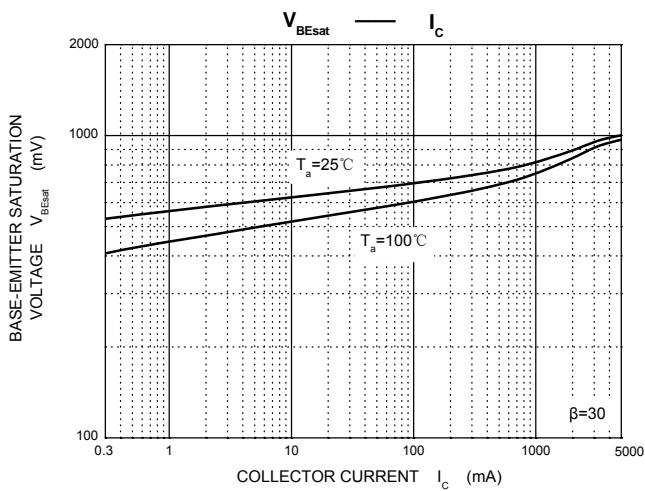
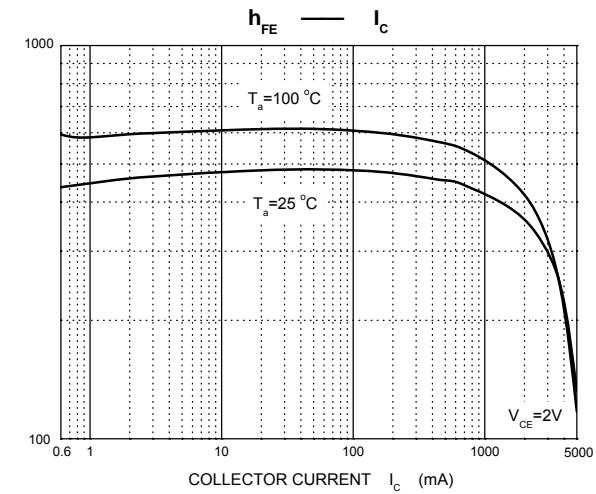
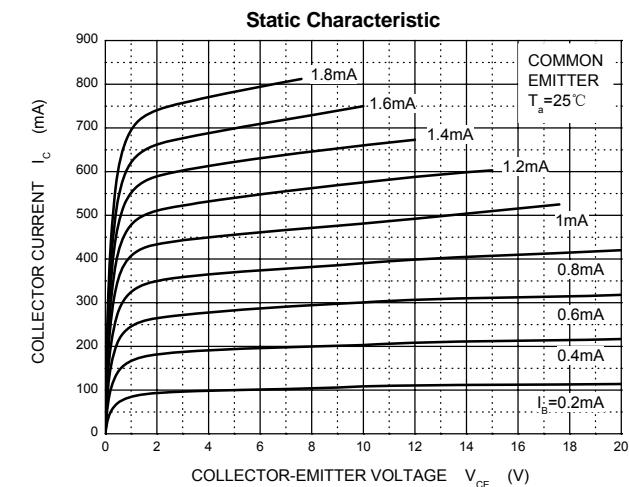
### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

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

### CLASSIFICATION OF $h_{FE(2)}$

RANK	Q	R	S
RANGE	230 - 380	340 - 600	560 - 800

# Typical Characteristics 2SD965



# X-ON Electronics

Largest Supplier of Electrical and Electronic Components

***Click to view similar products for Bipolar Transistors - BJT category:***

***Click to view products by Changjiang manufacturer:***

Other Similar products are found below :

[619691C](#) [MCH4017-TL-H](#) [MMBT-2369-TR](#) [BC546/116](#) [BC557/116](#) [BSW67A](#) [NJVMJD148T4G](#) [NTE123AP-10](#) [NTE153MCP](#) [NTE16](#)  
[NTE195A](#) [NTE92](#) [C4460](#) [2N4401-A](#) [2N6728](#) [2SA1419T-TD-H](#) [2SA2126-E](#) [2SB1204S-TL-E](#) [2SC2712S-GR,LF](#) [2SC5488A-TL-H](#)  
[2SD2150T100R](#) [SP000011176](#) [2N2907A](#) [2N3904-NS](#) [2N5769](#) [2SC2412KT146S](#) [2SD1816S-TL-E](#) [CPH6501-TL-E](#) [MCH4021-TL-E](#)  
[MJE340](#) [US6T6TR](#) [NJK0281DG](#) [732314D](#) [CPH3121-TL-E](#) [CPH6021-TL-H](#) [873787E](#) [IMZ2AT108](#) [UMX21NTR](#) [MCH6102-TL-E](#)  
[NJK0302DG](#) [2N3583](#) [30A02MH-TL-E](#) [NSV40301MZ4T1G](#) [NTE13](#) [NTE26](#) [NTE282](#) [NTE323](#) [NTE350](#) [NTE81](#) [STX83003-AP](#)