



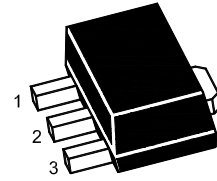
# 2SD965ASQ

## NPN Transistor

### Features

- Low saturation voltage
- Large Collector Power Dissipation and Current

SOT-89



1. Base 2. Collector 3. Emitter

Marking: Q: AQ

R: AR

S: AS

### Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	40	V
Collector Emitter Voltage	$V_{CEO}$	30	V
Emitter Base Voltage	$V_{EBO}$	7	V
Collector Current	$I_C$	5	A
Power Dissipation	$P_D$	750	mW
Maximum Junction-to-Ambient	$R_{\theta JA}$	167	°C/W
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to 150	°C



### Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

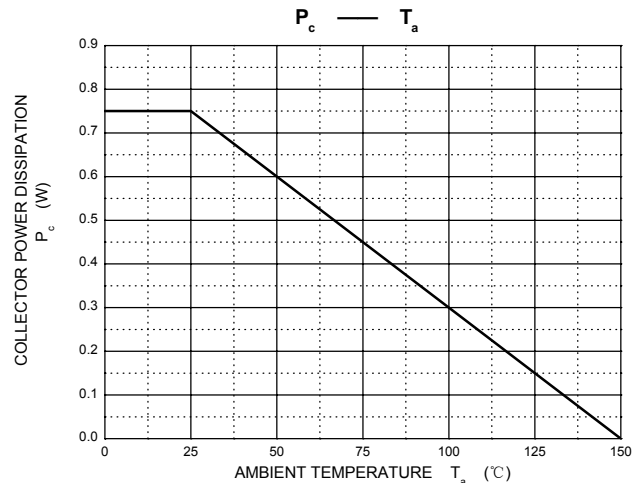
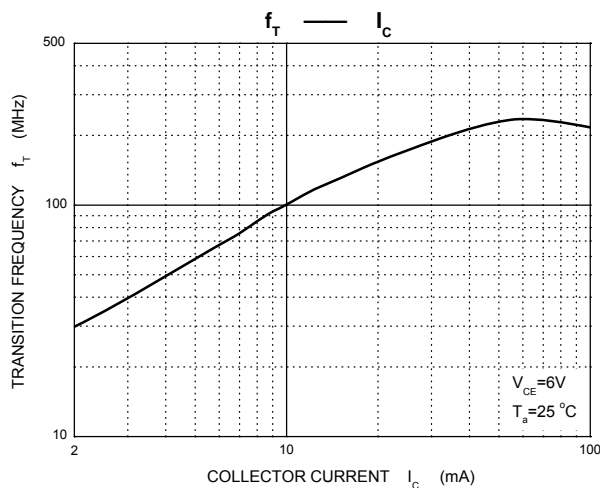
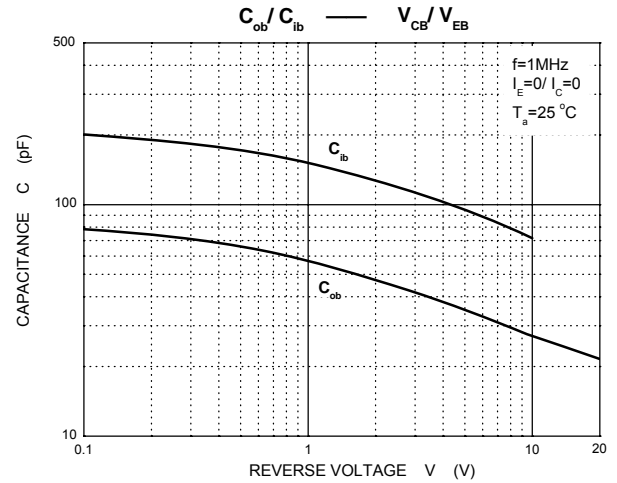
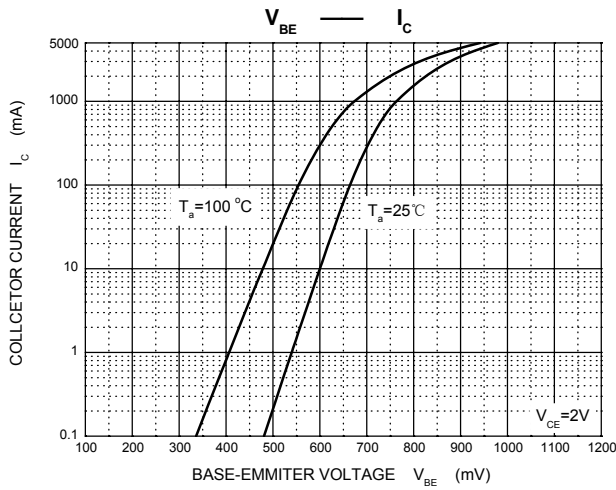
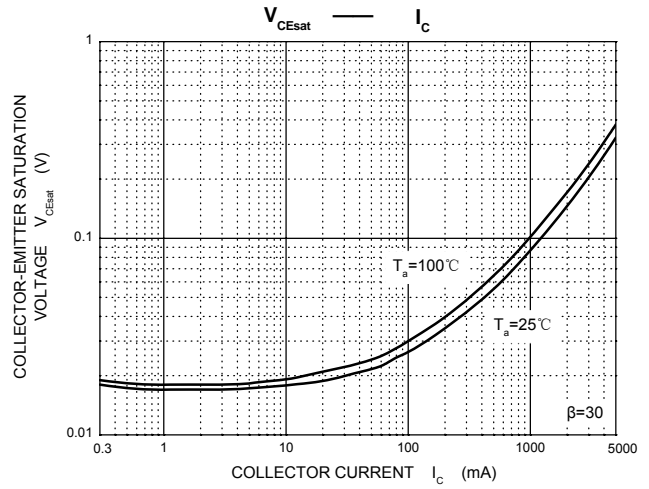
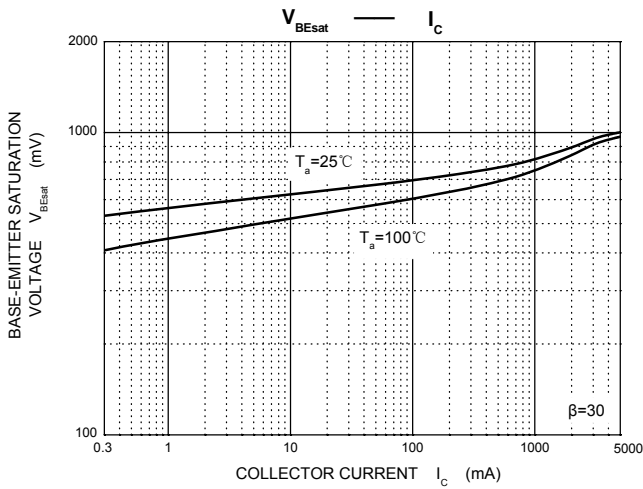
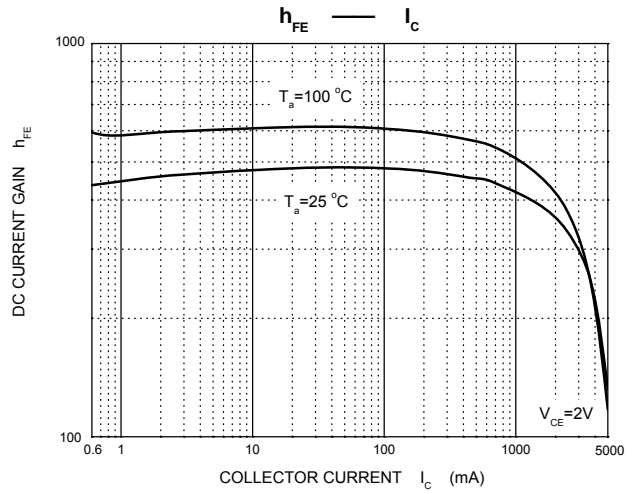
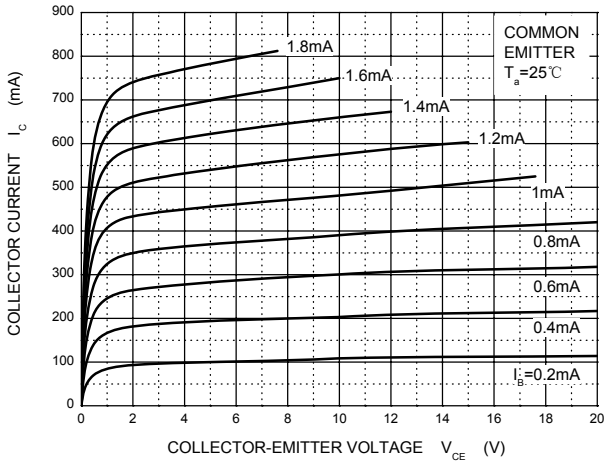
Parameter	Symbol	Min.	Typ.	Max.	
DC Current Gain at $V_{CE} = 2\text{ V}$ , $I_C = 500\text{ mA}$ Current Gain Group	Q R S $H_{FE}$	230	-	380	
		340	-	600	
		560	-	800	
at $V_{CE} = 2\text{ V}$ , $I_C = 1\text{ mA}$		-	200	-	
at $V_{CE} = 2\text{ V}$ , $I_C = 2\text{ A}$		150	-	-	
Collector Base Cutoff Current at $V_{CB} = 10\text{ V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$
Emitter Base Cutoff Current at $V_{EB} = 7\text{ V}$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$	$V_{(BR)CBO}$	40	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{(BR)CEO}$	30	-	-	V
Emitter Base Breakdown Voltage at $I_E = 10\text{ }\mu\text{A}$	$V_{(BR)EBO}$	7	-	-	V
Collector Emitter Saturation Voltage at $I_C = 3\text{ A}$ , $I_B = 0.1\text{ A}$	$V_{CE(sat)}$	-	-	1	V
Transition Frequency at $V_{CE} = 6\text{ V}$ , $I_C = 50\text{ mA}$	$f_T$	-	150	-	MHz
Collector Output Capacitance at $V_{CB} = 20\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$	$C_{ob}$	-	-	50	pF



# 2SD965ASQ

## NPN Transistor

Static Characteristic

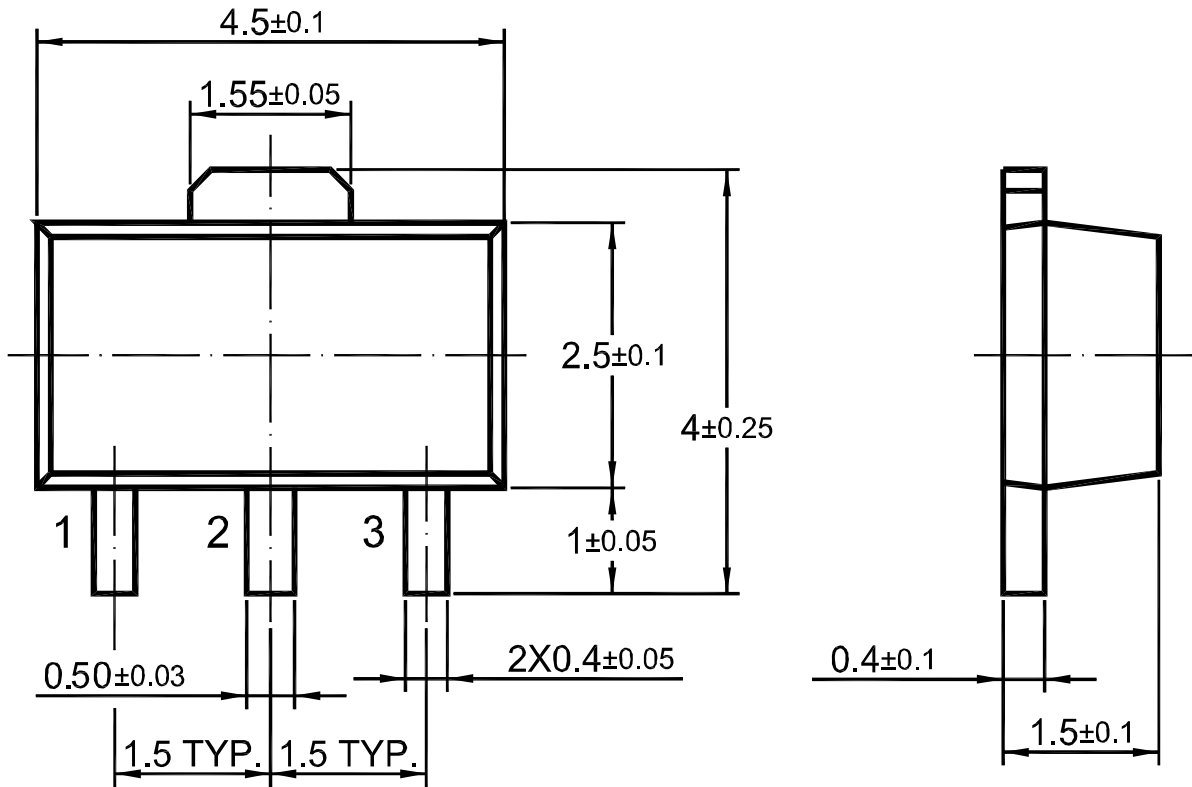




### Package Outline

SOT-89

Dimensions in mm



### Ordering information

Device	Package	Shipping
2SD965ASQ	SOT-89	1000/Tape&Reel(7inches)