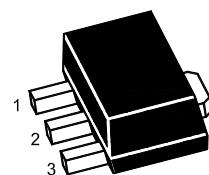


# ST 2SD965U

## NPN Silicon Epitaxial Planar Transistor

For low frequency power amplification

The transistor is subdivided into two groups, Q and R, according to its DC current gain.



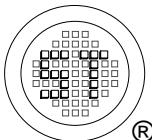
1.Base 2.Collector 3.Emitter  
SOT-89 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector to Base Voltage	$V_{CBO}$	40	V
Collector to Emitter Voltage	$V_{CEO}$	20	V
Emitter to Base Voltage	$V_{EBO}$	7	V
Collector Current	$I_C$	5	A
Peak Collector Current	$I_{CP}$	8	A
Total power dissipation	$P_{tot}$	0.75	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{Stg}$	- 55 to + 150	$^\circ\text{C}$

### Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2 \text{ V}$ , $I_C = 0.5 \text{ A}$ Current Gain Group Q at $V_{CE} = 2 \text{ V}$ , $I_C = 2 \text{ A}$	$h_{FE}$	230	-	380	-
	$h_{FE}$	340	-	600	-
	$h_{FE}$	150	-	-	-
Collector Emitter Breakdown Voltage at $I_C = 1 \text{ mA}$	$V_{CEO}$	20	-	-	V
Emitter Base Breakdown Voltage at $I_E = 10 \mu\text{A}$	$V_{EBO}$	7	-	-	V
Collector Cutoff Current at $V_{CB} = 10 \text{ V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$
Collector Cutoff Current at $V_{CE} = 10 \text{ V}$	$I_{CEO}$	-	-	1	$\mu\text{A}$
Emitter Cutoff Current at $V_{EB} = 7 \text{ V}$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$
Collector Emitter Saturation Voltage at $I_C = 3 \text{ A}$ , $I_B = 0.1 \text{ A}$	$V_{CE(sat)}$	-	-	1	V
Transition Frequency at $V_{CB} = 6 \text{ V}$ , $-I_E = 50 \text{ mA}$ , $f = 200 \text{ MHz}$	$f_T$	-	150	-	MHz
Collector Output Capacitance at $V_{CB} = 20 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{ob}$	-	-	50	pF

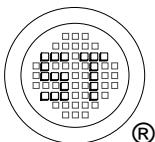
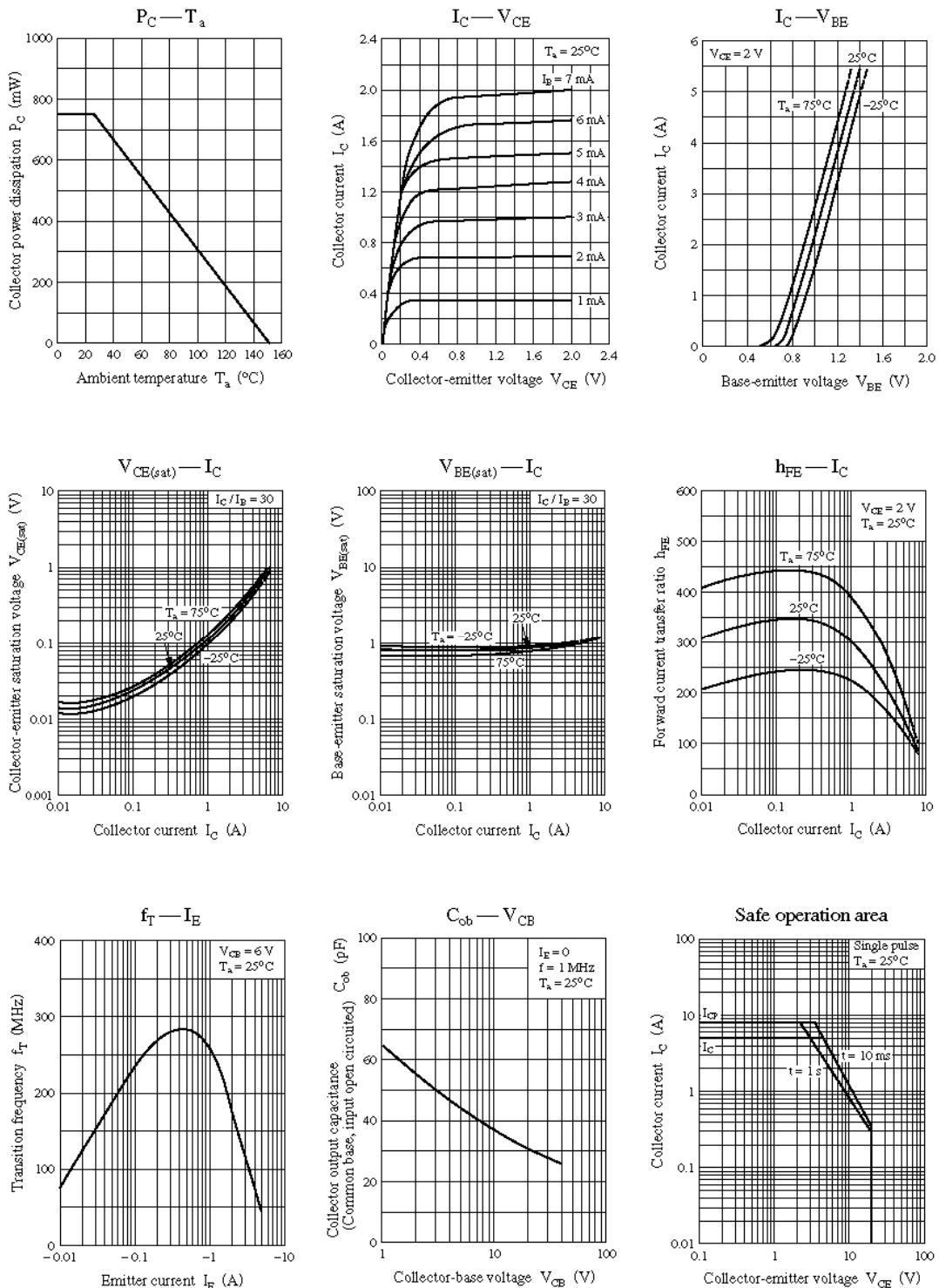


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Dated : 22/05/2006

# ST 2SD965U



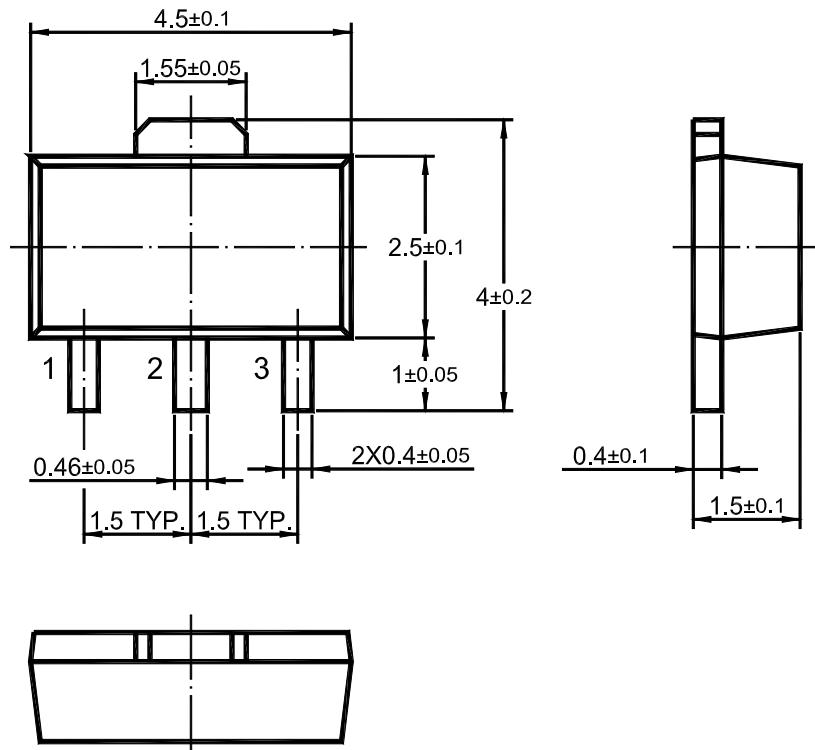
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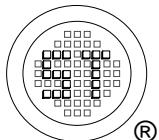
Dated : 22/05/2006

# ST 2SD965U

## SOT-89 PACKAGE OUTLINE



Dimensions in mm



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