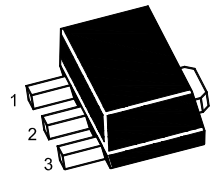
2SD965U

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

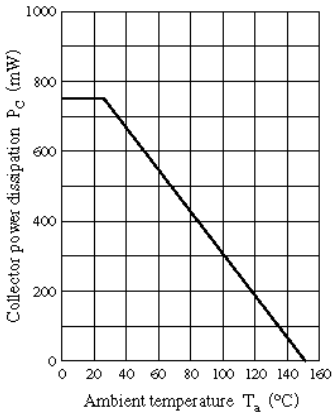
Absolute Maximum Ratings (T_a = 25℃)

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	℃
Storage Temperature Range	T_{Stg}	- 55 to + 150	℃

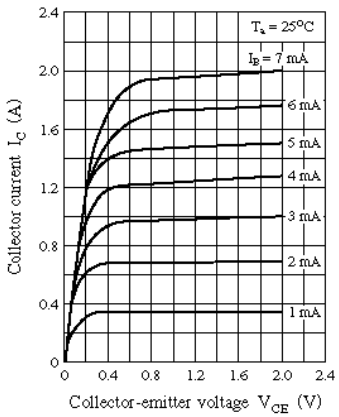
Characteristics at T_a = 25℃

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

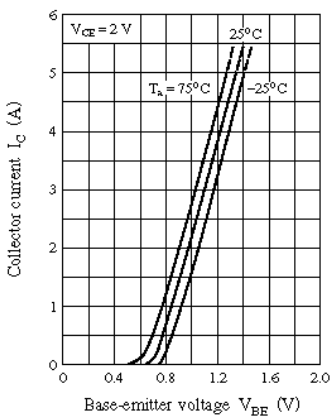
P_C — T_a



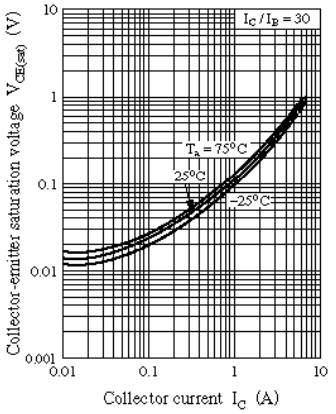
I_C — V_{CE}



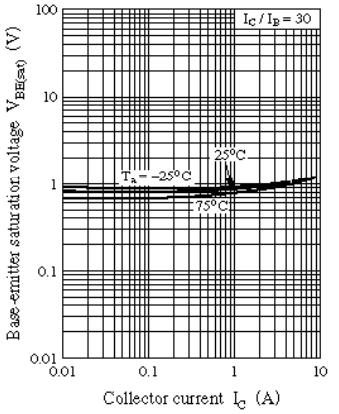
I_C — V_{BE}



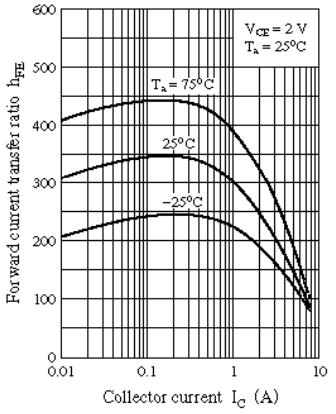
$V_{CE(sat)}$ — I_C



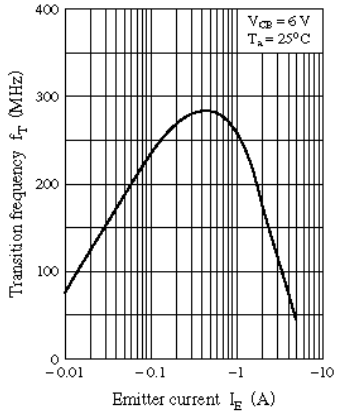
$V_{BE(sat)}$ — I_C



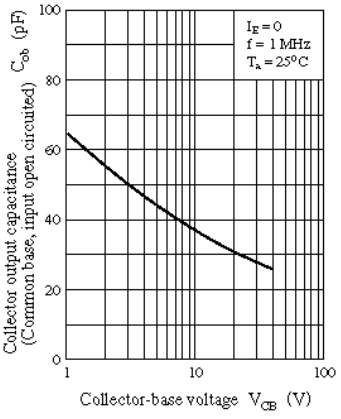
h_{FE} — I_C



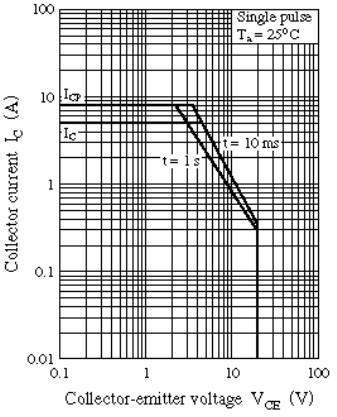
f_T — I_E



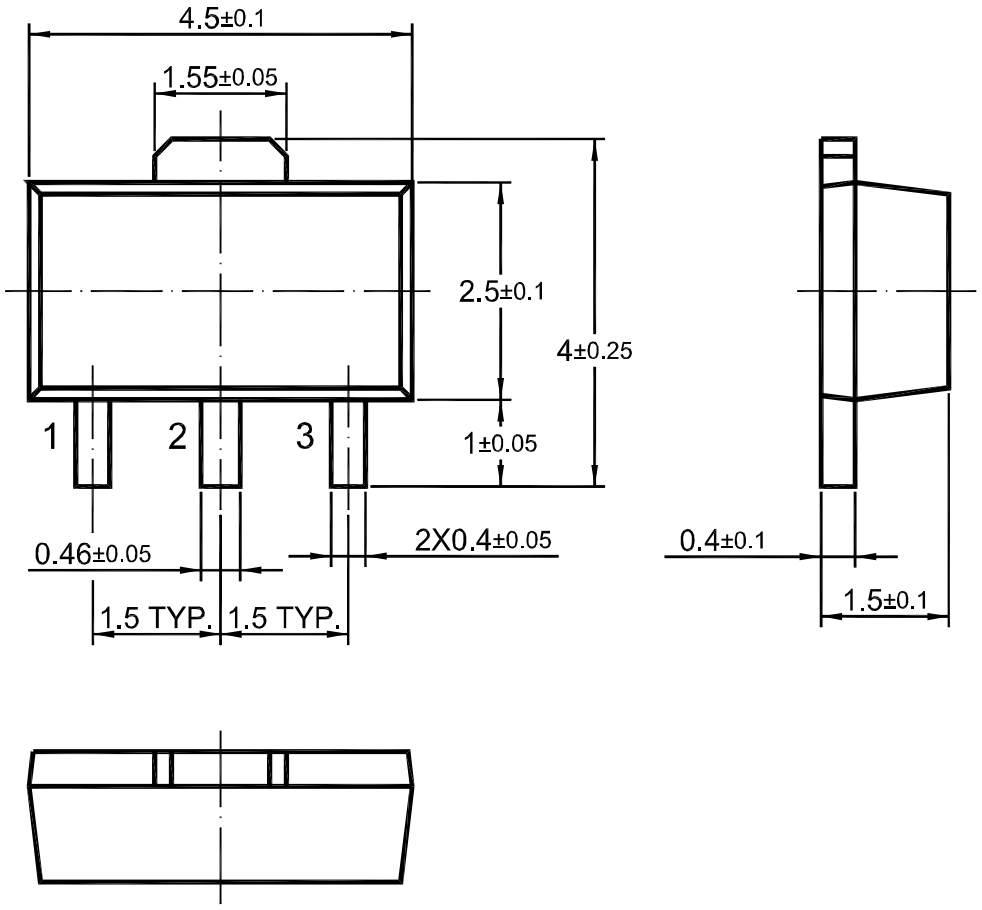
C_{ob} — V_{CB}



Safe operation area



SOT-89 PACKAGE OUTLINE



Dimensions in mm