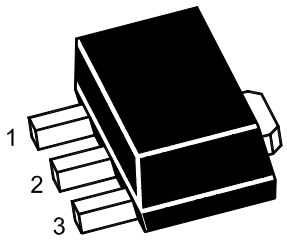
2SD1760U

NPN Silicon Epitaxial Planar Transistor

Power Transistor



1.Base 2.Collector 3.Emitter

SOT-89 Plastic Package

Absolute Maximum Ratings (T_a = 25℃)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	45	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current - DC Collector Current - Pulse [1)]	I_C I_{CP}	3 4.5	A
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{Stg}	- 55 to + 150	℃

[1)] Single pulse, P_W = 100 ms.

Characteristics at T_a = 25℃

Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE} = 3 V, I_C = 0.5 A	Current Gain Group	P Q R	h_{FE} h_{FE} h_{FE}	82 120 180	- - -	180 270 390	- - -
Collector Cutoff Current at V_{CB} = 40 V			I_{CBO}	-	-	1	µA
Emitter Cutoff Current at V_{EB} = 4 V			I_{EBO}	-	-	1	µA
Collector Base Breakdown Voltage at I_C = 50 µA			$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA			$V_{(BR)CEO}$	45	-	-	V
Emitter Base Breakdown Voltage at I_E = 50 µA			$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at I_C = 2 A, I_B = 200 mA			$V_{CE(sat)}$	-	-	1	V
Transition Frequency at V_{CE} = 5 V, $-I_E$ = 0.5 A, f = 30 MHz			f_T	-	90	-	MHz
Output Capacitance at V_{CB} = 10 V, f = 1 MHz			C_{ob}	-	40	-	pF

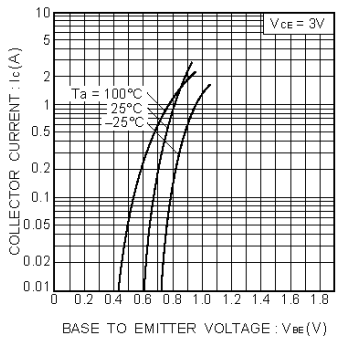


Fig.1 Grounded emitter propagation characteristics

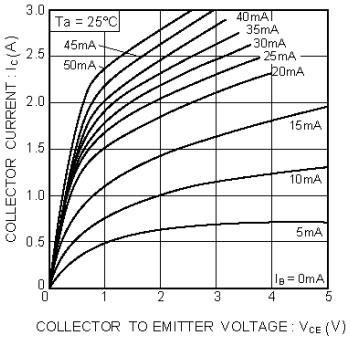


Fig.2 Grounded emitter output characteristics (Ⅰ)

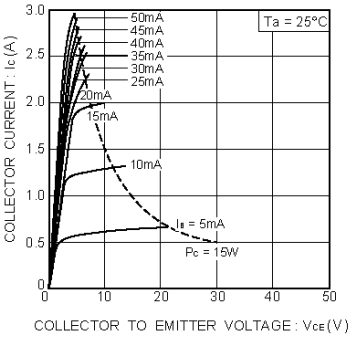


Fig.3 Grounded-emitter output characteristics(Ⅱ)

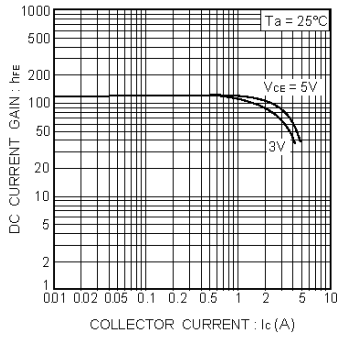


Fig.4 DC current gain vs. collector current(Ⅰ)

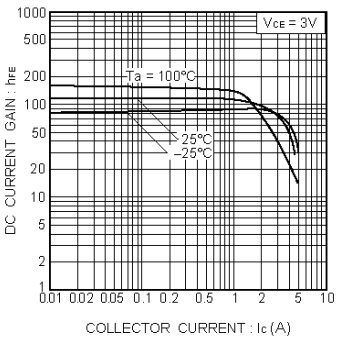


Fig.5 DC current gain vs. collector curren(Ⅱ)

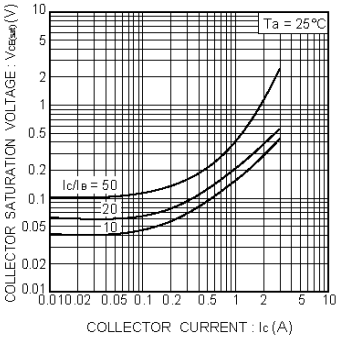


Fig.6 Collector-emitter saturation voltage vs. collector current

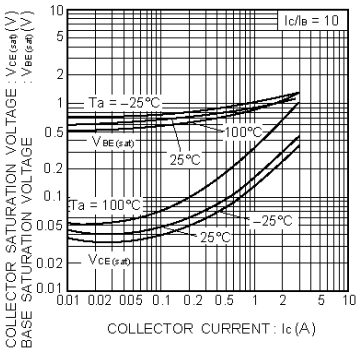


Fig.7 Collector-emitter saturation voltage vs. collector current
Base-emitter saturation voltage vs. collector current

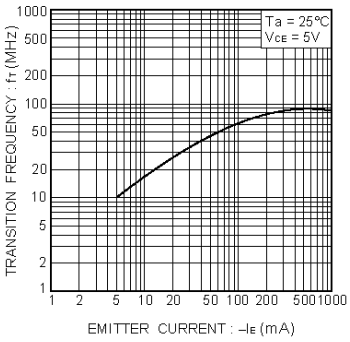


Fig.8 Gain bandwidth product vs. emitter current

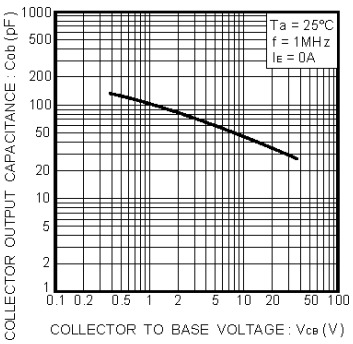
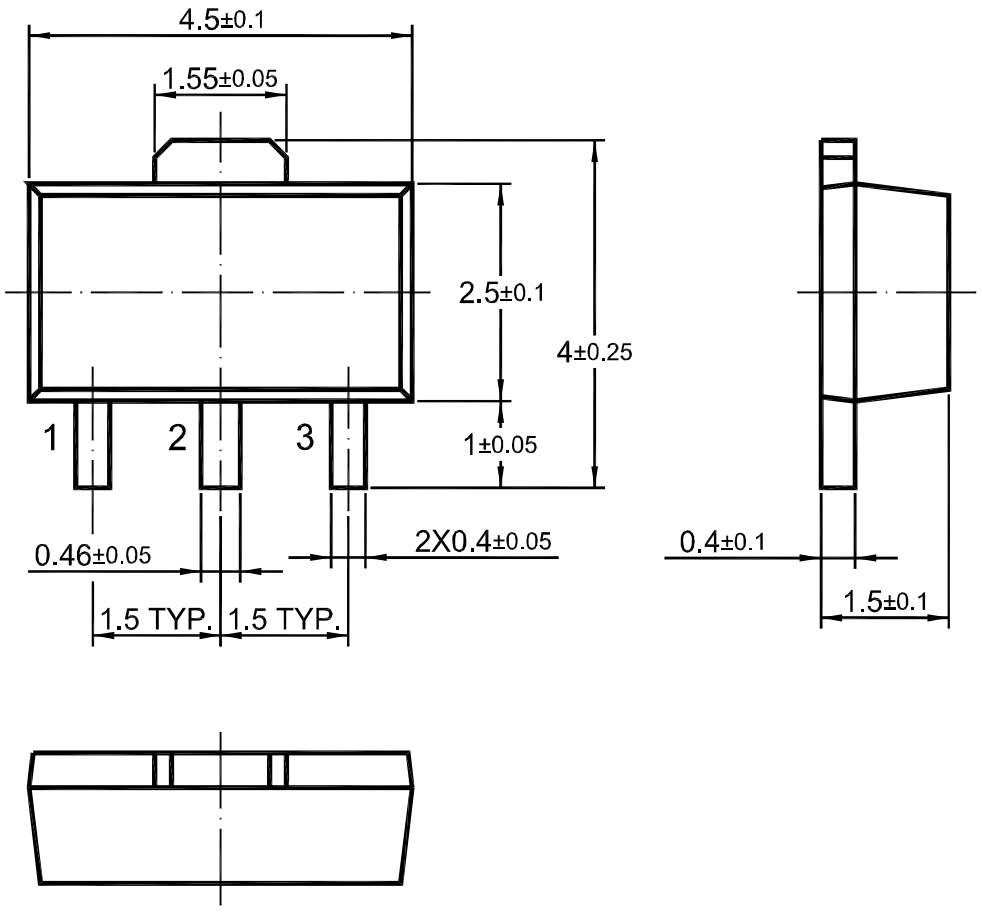


Fig.9 Collector output capacitance vs. collector-base voltage

SOT-89 PACKAGE OUTLINE



Dimensions in mm