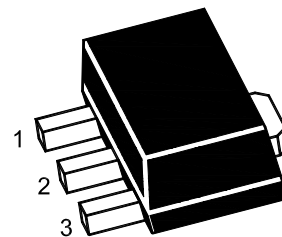


ST 2SD1760U

NPN Silicon Epitaxial Planar Transistor

Power Transistor



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

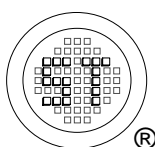
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

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	I_C	3	A
Collector Current - Pulse ¹⁾	I_{CP}	4.5	A
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{Stg}	- 55 to + 150	$^\circ\text{C}$

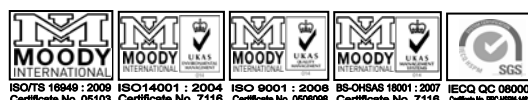
¹⁾ Single pulse, $P_W = 100\text{ ms}$.

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

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



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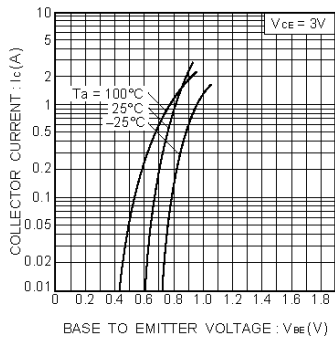


Fig.1 Grounded emitter propagation characteristics

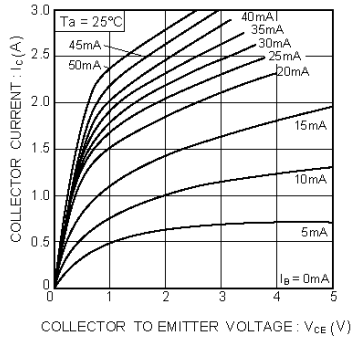


Fig.2 Grounded emitter output characteristics (I)

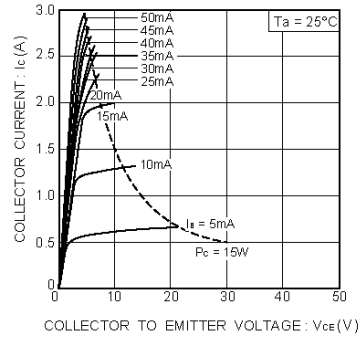


Fig.3 Grounded-emitter output characteristics(II)

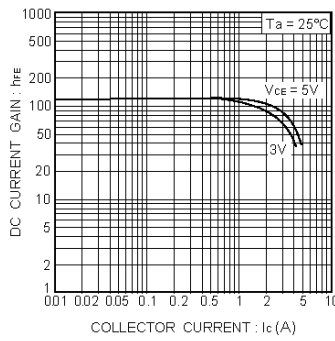


Fig.4 DC current gain vs. collector current(I)

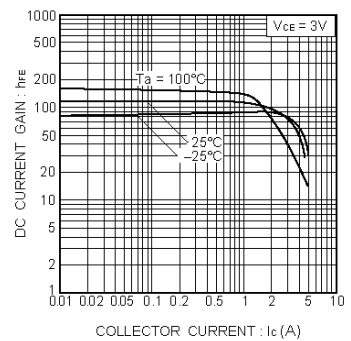


Fig.5 DC current gain vs. collector current(II)

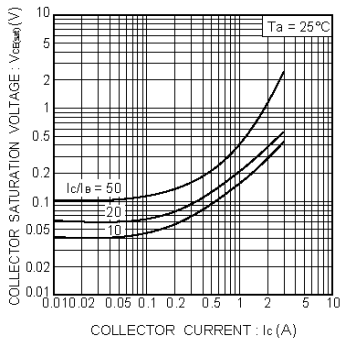


Fig.6 Collector-emitter saturation voltage vs. collector current

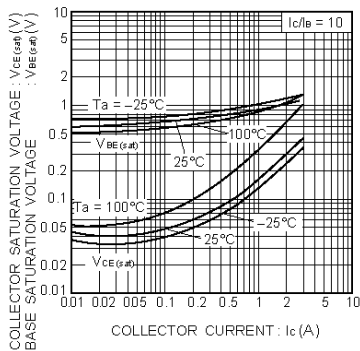


Fig.7 Collector-emitter saturation voltage vs. collector current
Base-emitter saturation voltage vs. collector current

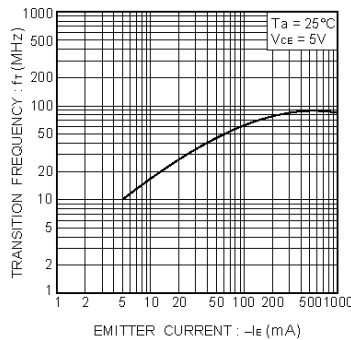


Fig.8 Gain bandwidth product vs. emitter current

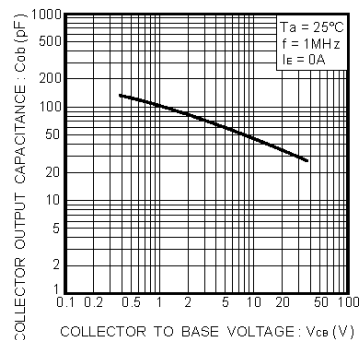
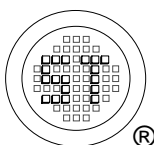
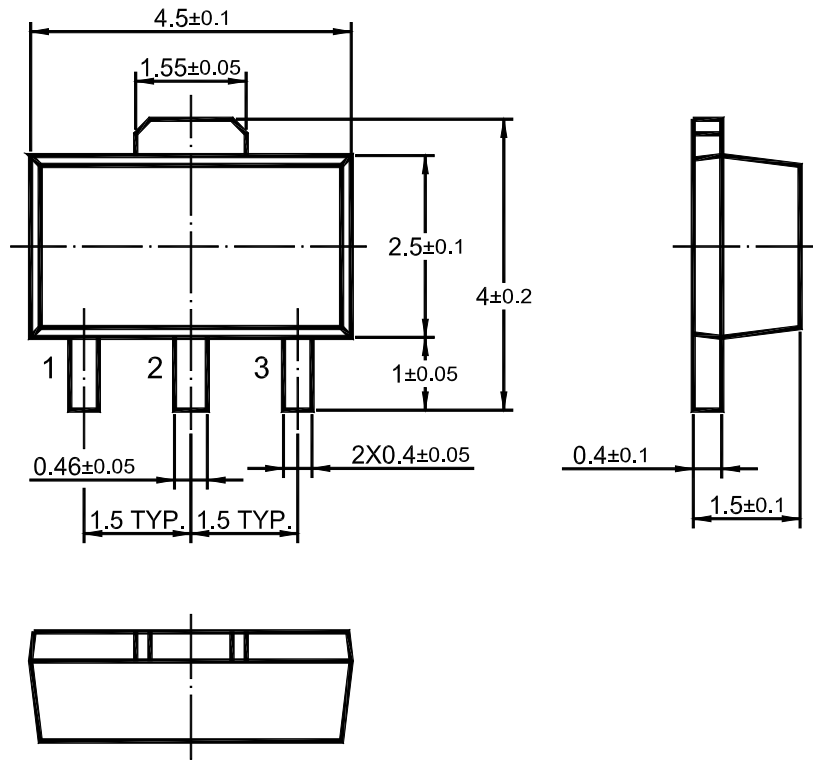


Fig.9 Collector output capacitance vs. collector-base voltage

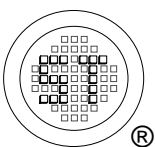


ST 2SD1760U

SOT-89 PACKAGE OUTLINE



Dimensions in mm



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