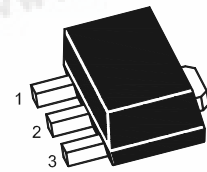


ST 2SD1766U

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NPN Silicon Epitaxial Planar Transistor

Medium power amplifier



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

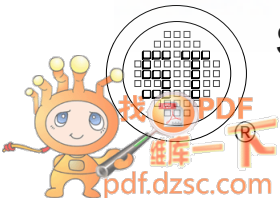
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V _{CBO}	40	V
Collector Emitter Voltage	V _{CEO}	32	V
Emitter Base Voltage	V _{EBO}	5	V
Collector Current	I _C	2	A
Peak Collector Current (Single pulse, Pw = 20 ms)	I _{CP}	2.5	A
Collector Power Dissipation	P _C	0.5 2 ¹⁾	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	- 55 to + 150	°C

¹⁾ When mounted on a 40 X 40 X 0.7 mm ceramic board.

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V _{CE} = 3 V, I _C = 500 mA Current Gain Group P Q R	h _{FE}	82	-	180	-
	h _{FE}	120	-	270	-
	h _{FE}	180	-	390	-
	h _{FE}	180	-	390	-
Collector Base Cutoff Current at V _{CB} = 20 V	I _{CBO}	-	-	1	μA
Emitter Base Cutoff Current at V _{EB} = 4 V	I _{EBO}	-	-	1	μA
Collector Base Breakdown Voltage at I _C = 50 μA	V _{(BR)CBO}	40	-	-	V
Collector Emitter Breakdown Voltage at I _C = 1 mA	V _{(BR)CEO}	32	-	-	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)}	-	-	0.8	V
Transition Frequency at V _{CE} = 5 V, -I _E = 500 mA, f = 100 MHz	f _T	-	100	-	MHz
Collector Base Capacitance at V _{CB} = 10 V, f = 1 MHz	C _{ob}	-	30	-	pF



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Dated : 18/08/2009

Fig. 1 $P_C - T_a$

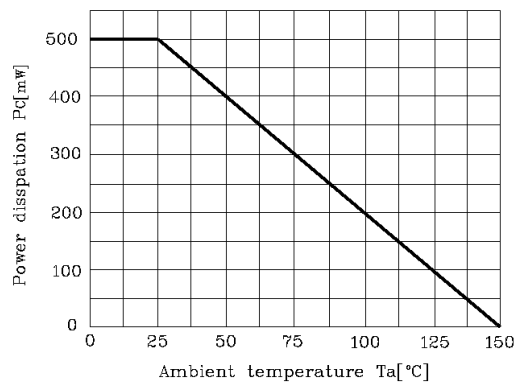


Fig. 2 $I_C - V_{BE}$

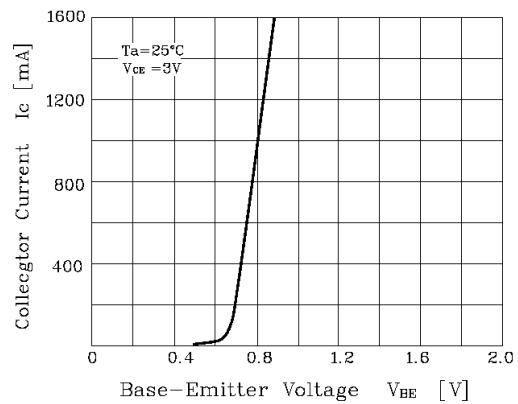


Fig. 3 $I_C - V_{CE}$

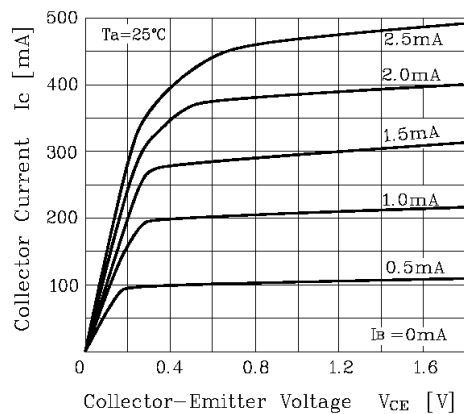


Fig. 4 $V_{CE(sat)} - I_C$

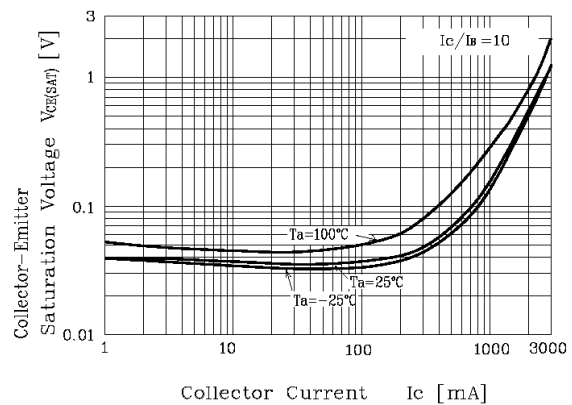
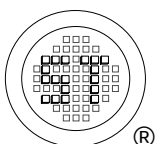
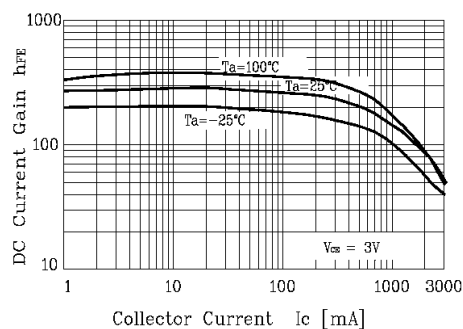
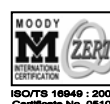


Fig. 5 $h_{FE} - I_C$



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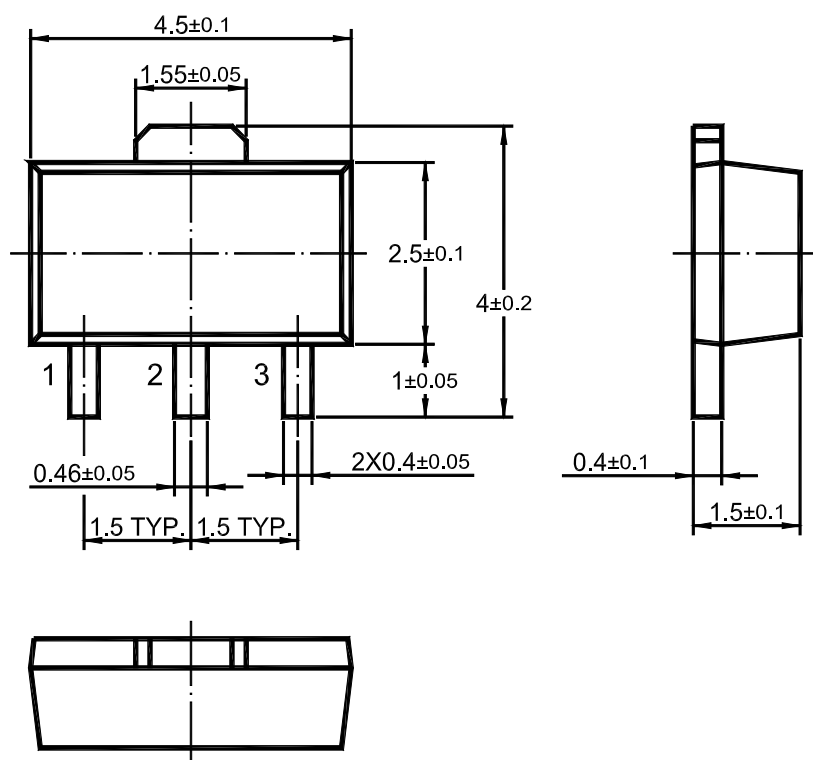
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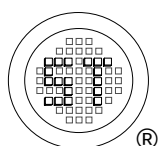
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SOT-89 PACKAGE OUTLINE

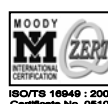


Dimensions in mm



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