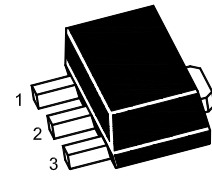


ST 2SD882U

NPN Silicon Power Transistor

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



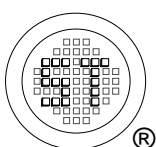
1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

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

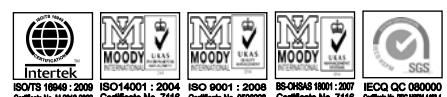
Parameter	Symbol	Value	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	30	V
Emitter to Base Voltage	V_{EBO}	5	V
Collector Current	I_{C}	3	A
Peak Collector Current ($t = 350 \mu\text{s}$)	I_{CP}	7	A
Total power dissipation ($T_a = 25^\circ\text{C}$)	P_{tot}	1	W
Total power dissipation ($T_c = 25^\circ\text{C}$)	P_{tot}	10	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

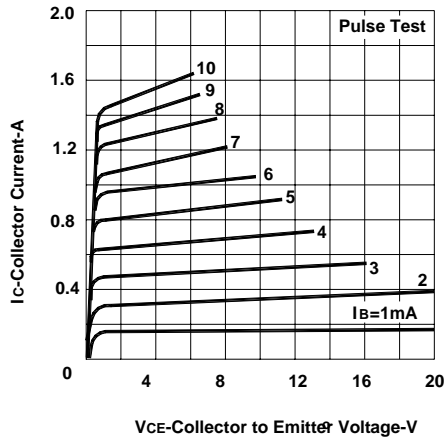
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{\text{CE}} = 2 \text{ V}$, $I_{\text{C}} = 20 \text{ mA}$ at $V_{\text{CE}} = 2 \text{ V}$, $I_{\text{C}} = 1 \text{ A}$ Current Gain Group	R	h_{FE}	30	-	-
	Q	h_{FE}	60	-	120
	P	h_{FE}	100	-	200
	E	h_{FE}	160	-	320
	E	h_{FE}	200	-	400
Collector Base Cutoff Current at $V_{\text{CB}} = 30 \text{ V}$	I_{CBO}	-	-	1	μA
Emitter Base Cutoff Current at $V_{\text{EB}} = 3 \text{ V}$	I_{EBO}	-	-	1	μA
Collector Emitter Saturation Voltage at $I_{\text{C}} = 2 \text{ A}$, $I_{\text{B}} = 0.2 \text{ A}$	$V_{\text{CE(sat)}}$	-	-	0.5	V
Base Emitter Saturation Voltage at $I_{\text{C}} = 2 \text{ A}$, $I_{\text{B}} = 0.2 \text{ A}$	$V_{\text{BE(sat)}}$	-	-	2	V
Gain Bandwidth Product at $V_{\text{CE}} = 5 \text{ V}$, $I_{\text{C}} = 0.1 \text{ A}$	f_{T}	-	90	-	MHz
Output Capacitance at $V_{\text{CB}} = 10 \text{ V}$, $f = 1 \text{ MHz}$	C_{ob}	-	45	-	pF



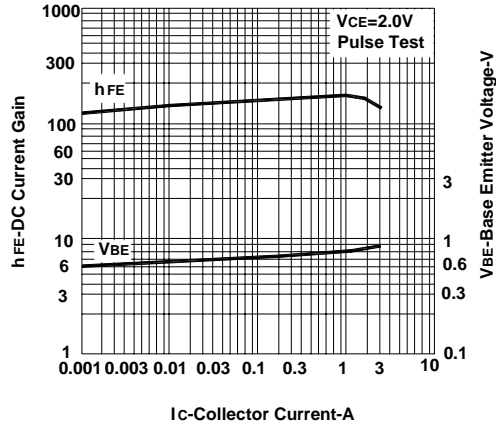
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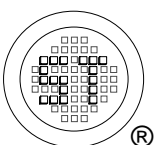
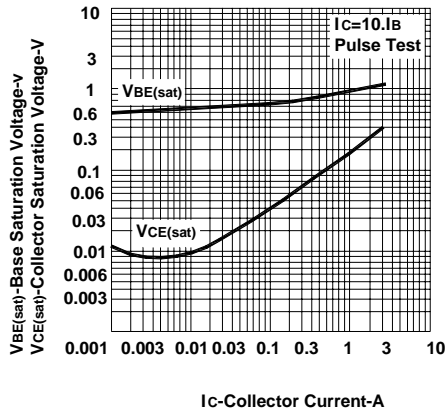
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



DC CURRENT GAIN, BASE TO EMITTER VOLTAGE vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT

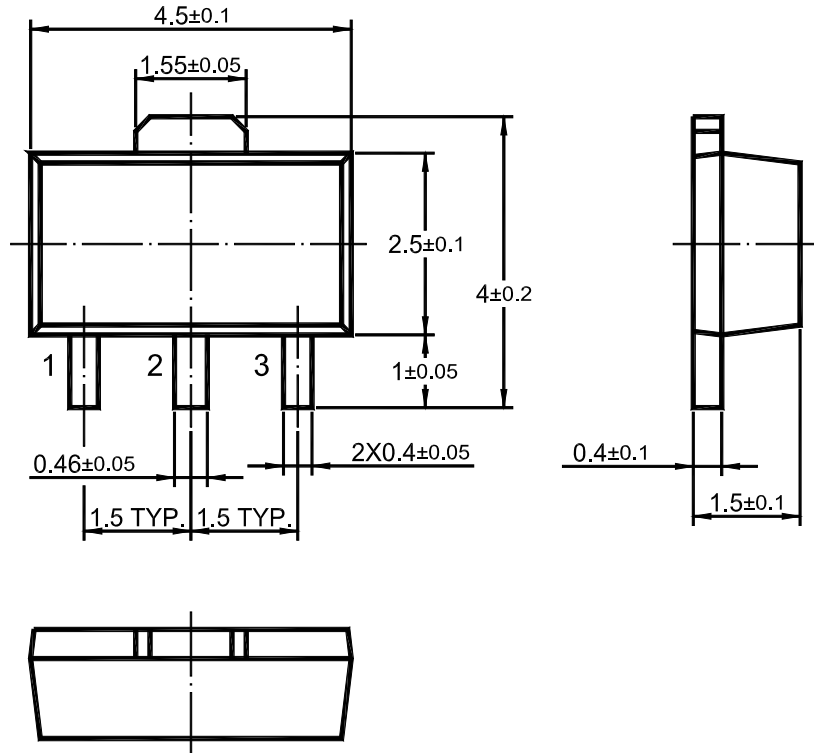


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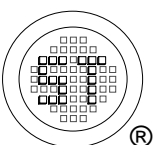


ST 2SD882U

SOT-89 PACKAGE OUTLINE



Dimensions in mm



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Dated : 01/02/2013 Rev: 03