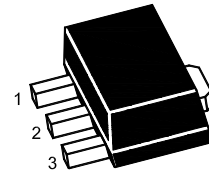


# 2SD882U

## NPN Silicon Power Transistor

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



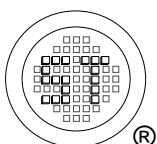
1.Base 2.Collector 3.Emitter  
SOT-89 Plastic Package

### 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 $T_a = 25^\circ\text{C}$

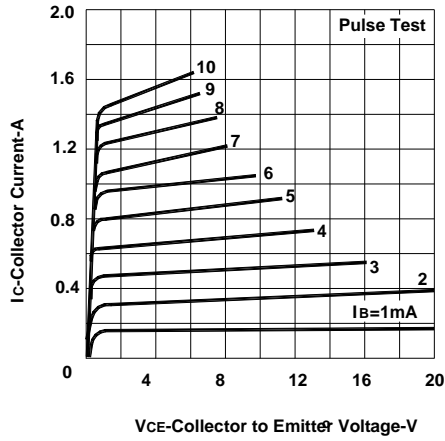
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 2 \text{ V}$ , $I_C = 20 \text{ mA}$ at $V_{CE} = 2 \text{ V}$ , $I_C = 1 \text{ A}$ Current Gain Group	R	$h_{FE}$	30	-	-
	Q	$h_{FE}$	60	-	120
	P	$h_{FE}$	100	-	200
	E	$h_{FE}$	160	-	320
	E	$h_{FE}$	200	-	400
Collector Base Cutoff Current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



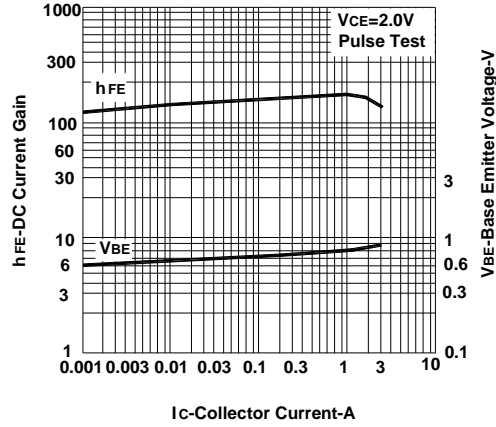
**SEMTECH ELECTRONICS LTD.**



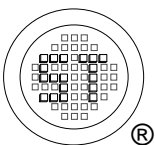
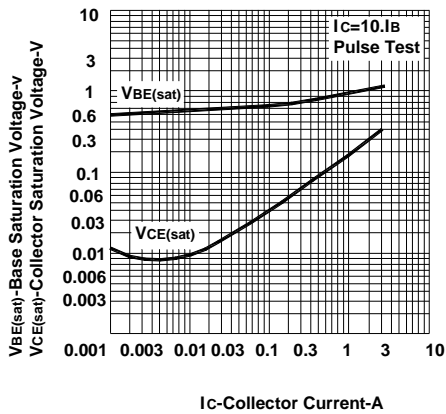
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



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



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



**SEMTECH ELECTRONICS LTD.**



ISO/TS 16949 : 2008  
Certificate No. 180713000



ISO14001 : 2004  
Certificate No. 7116



ISO 9001 : 2008  
Certificate No. 50719410



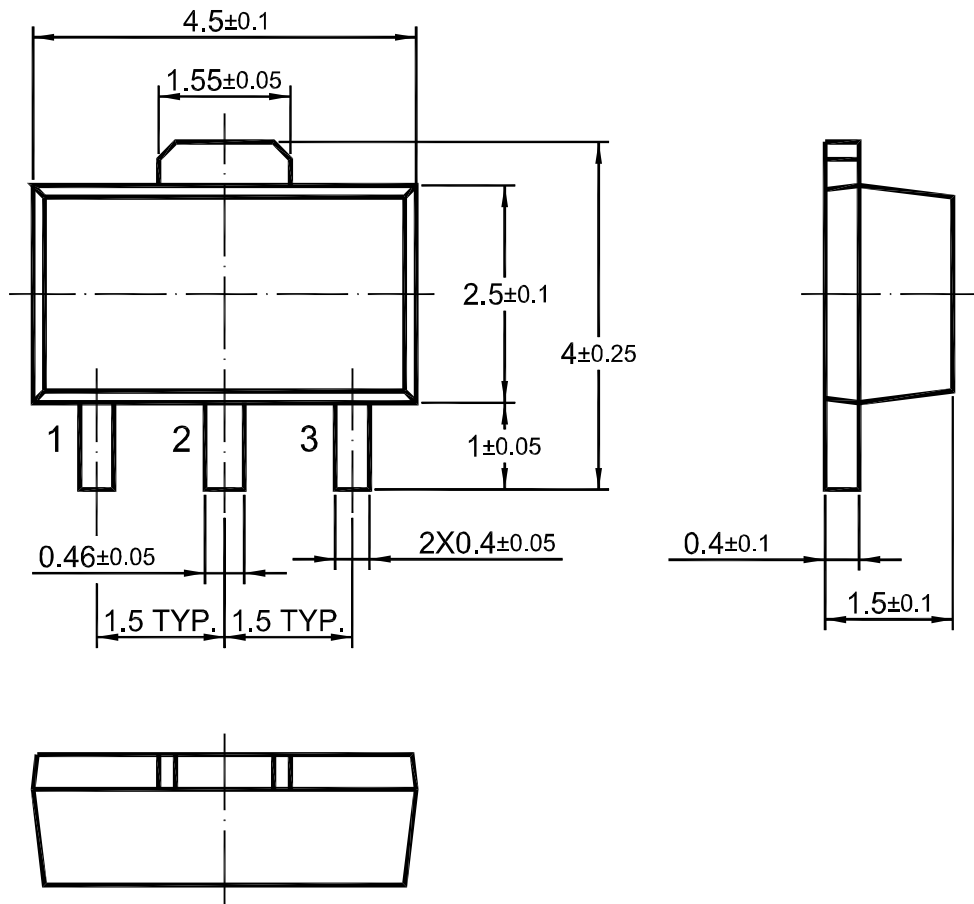
BS-OHSAS 18001 : 2007  
Certificate No. 7116



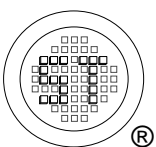
IECQ QC 080000  
Certificate No. PRC-HSPM-1483-1

# 2SD882U

## SOT-89 PACKAGE OUTLINE



Dimensions in mm



**SEMTECH ELECTRONICS LTD.**



Dated: 25/02/2016 Rev: 05