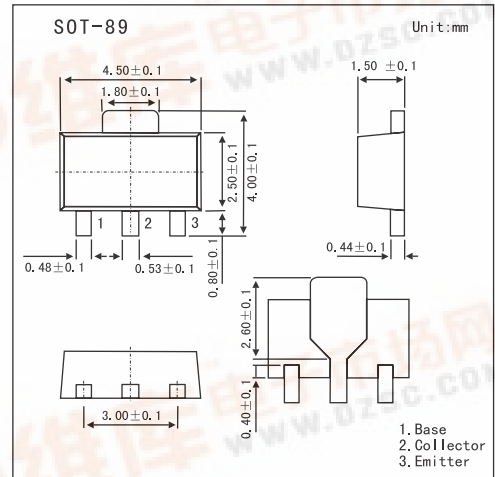


SMD Type Transistors

Silicon NPN Epitaxial  
2SD1418



■ Features

- Low frequency power amplifier.

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector to base voltage	V <sub>CB0</sub>	120	V
Collector to emitter voltage	V <sub>CEO</sub>	80	V
Emitter to base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	1	A
Peak collector current	I <sub>CP</sub> *1	2	A
Collector power dissipation	P <sub>C</sub> *2	1	W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\*1. PW ≤ 10 ms; d ≤ 0.02.

\*2. Value on the alumina ceramic board (12.5 X 20 X 0.7 mm)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 10 μA, I <sub>E</sub> = 0	120			V
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 1 mA, R <sub>BE</sub> = ∞	80			V
Emitter to base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 10 μA, I <sub>C</sub> = 0	5			V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 100 V, I <sub>E</sub> = 0			10	μA
DC current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 150 mA	60		320	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 500 mA, I <sub>B</sub> = 50 mA			1	V
Base to emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 150 mA			1.5	V
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 150 mA		140		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz		12		pF

■ hFE Classification

Marking	D		
Rank	A	B	C
hFE	60~120	100~200	160~320

