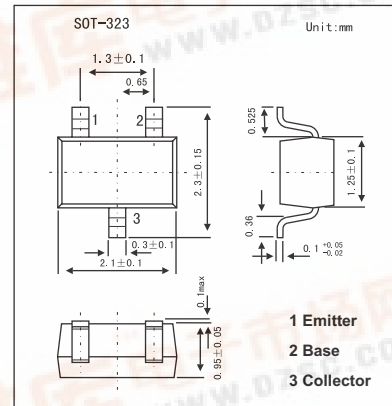


SMD Type Transistors

Silicon NPN Epitaxial  
2SC4117

■ Features

- High voltage
- High hFE
- Low noise
- Small package



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	120	V
Collector-emitter voltage	V <sub>CEO</sub>	120	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector current	I <sub>c</sub>	100	mA
Base current	I <sub>B</sub>	20	mA
Collector power dissipation	P <sub>c</sub>	100	mW
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature range	T <sub>stg</sub>	-55 to +125	°C

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> = 120 V, I <sub>E</sub> = 0			0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0			0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 6 V, I <sub>C</sub> = 2 mA	200		700	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA			0.3	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 6 V, I <sub>C</sub> = 1 mA		100		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz		3.0		pF
Noise figure	NF	V <sub>CE</sub> = 6 V, I <sub>C</sub> = 0.1 mA, f = 1 kHz, R <sub>G</sub> = 10 K Ω		1.0	10	dB

■ hFE Classification

Marking	DG	DL
Rank	GR	BL
hFE	200~400	350~700

