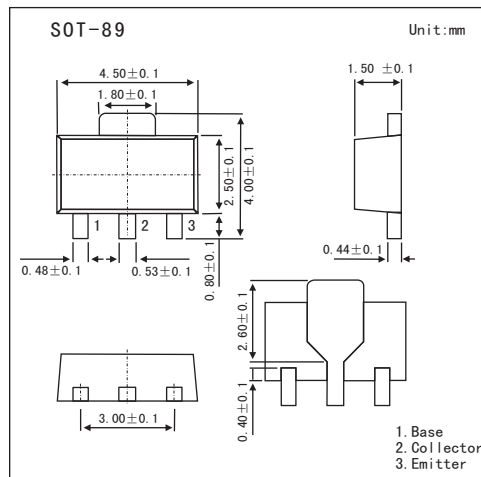


# 2SC2780

### ■ Features

- High Collector-emitter voltage.
- Complements to PNP type 2SA1173



### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	140	V
Collector-emitter voltage	V <sub>CEO</sub>	140	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	50	mA
	I <sub>CP</sub> *1	2.5	A
Collector power dissipation	P <sub>C</sub>	0.5	W
	P <sub>C</sub> *2	2	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\*1. Pw ≤ 10ms, duty cycle ≤ 50%

\*2. When mounted on ceramic substrate of 16cm<sup>2</sup> × 0.7mm

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditons	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> =140V			0.1	μA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> =5V			0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA	50	180		
		V <sub>CE</sub> =10V, I <sub>C</sub> =10mA	90		400	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =20mA, I <sub>B</sub> =2mA		0.07	0.6	V
Base saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =20mA, I <sub>B</sub> =2mA		0.75	1.0	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>E</sub> = -10mA		120		MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0A, f=1MHz		2.3		pF

### ■ hFE Classification

Marking	NM	NL	NK
hFE	82~180	120~270	180~390