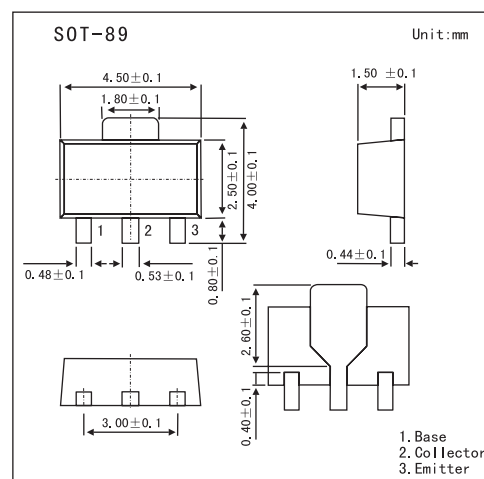


## Medium Power Transistor

## 2SC5053

## ■ Features

- Low saturation voltage, typically  $V_{CE(sat)} = 0.12V$  at  $I_C / I_B = 500mA / 50mA$ .
- $P_C = 2W$  (on  $40 \times 40 \times 0.7mm$  ceramic board).

■ Absolute Maximum Ratings  $T_a = 25^\circ C$ 

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-60	V
Collector-emitter voltage	$V_{CE0}$	-50	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_C$	-1	A
	$I_C$ (Pulse) *1	-2	A
Collector power dissipation	$P_C$	0.5	W
	$P_C$ *2	2	W
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$

\*1. Single pulse,  $P_w = 100ms$ ,  $duty = 1/2$ .

\*2.  $40 \times 40 \times 0.7mm$  Ceramic board.

■ Electrical Characteristics  $T_a = 25^\circ C$ 

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base voltage	$BV_{CB0}$	$I_C = -50\mu A$	-60			V
Collector-emitter voltage	$BV_{CE0}$	$I_C = -1mA$	-50			V
Emitter-base voltage	$BV_{EB0}$	$I_E = -50\mu A$	-5			V
Collector cutoff current	$I_{CB0}$	$V_{CB} = -40V$			-0.1	$\mu A$
Emitter cutoff current	$I_{EB0}$	$V_{EB} = -4V$			-0.5	$\mu A$
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$			-0.4	V
Forward current transfer ratio	$h_{FE}$	$V_{CE} = -3V, I_C = -0.5A$	120		270	
Transition frequency	$f_T$	$V_{CE} = -5V, I_E = 50mA, f = 100MHz$		150		MHz
Output capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0A, f = 1MHz$		20		pF

## ■ hFE Classification

Marking	CG
Rank	QR