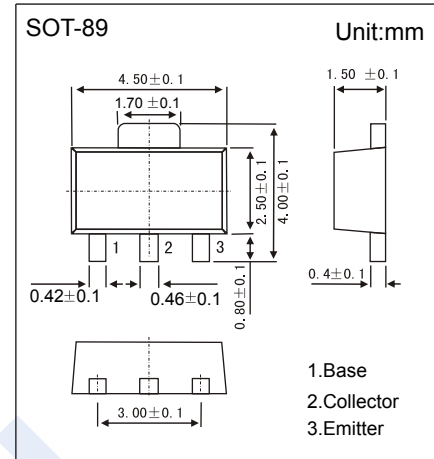


NPN Transistors

2SC5053

■ Features

- Collector Current Capability $I_C=2A$
- Collector Emitter Voltage $V_{CE0}=50V$
- Complementary to 2SA1900



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	60	V
Collector - Emitter Voltage	V_{CEO}	50	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	1	A
Collector Current - Pulse	I_{CP}	2	
Collector Power Dissipation (Note.1)	P_C	0.5	W
		2	
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1 : When mounted on a 40X40x0.7mm ceramic board.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100 \mu A, I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1 mA, I_B = 0$	50			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 40 V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4 V, I_C = 0$			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 mA, I_B = 50 mA$			0.4	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 mA, I_B = 50 mA$			1.2	
DC current gain	h_{FE}	$V_{CE} = 3 V, I_C = 500 mA$	120		390	
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$		20		pF
Transition frequency	f_T	$V_{CE} = 5 V, I_C = 50 mA, f = 100 MHz$		150		MHz

■ Classification of h_{fe}

Type	2SC5053-Q	2SC5053-R
Range	120-270	180-390
Marking	CG Q*	CG R*

NPN Transistors

2SC5053

Typical Characteristics

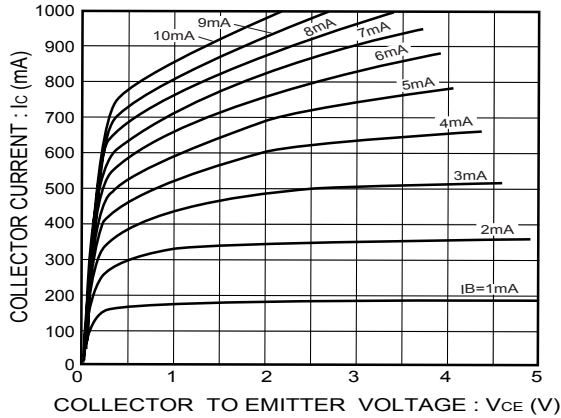


Fig.1 Grounded emitter output characteristics

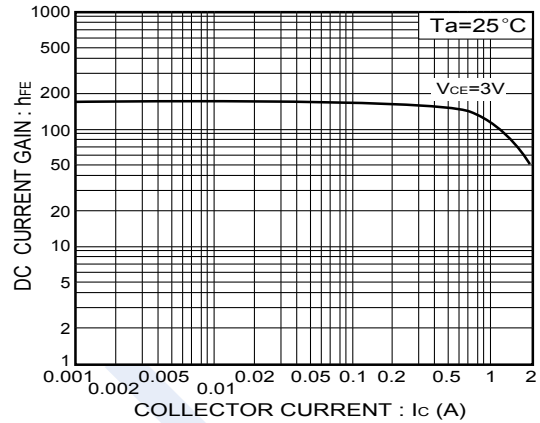


Fig.2 DC current gain vs. collector current

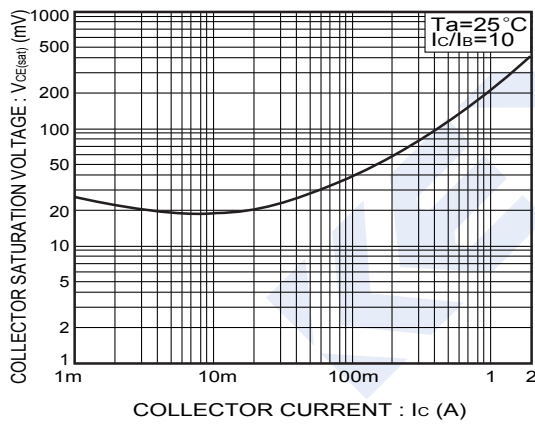


Fig.3 Collector-emitter saturation voltage vs. collector current

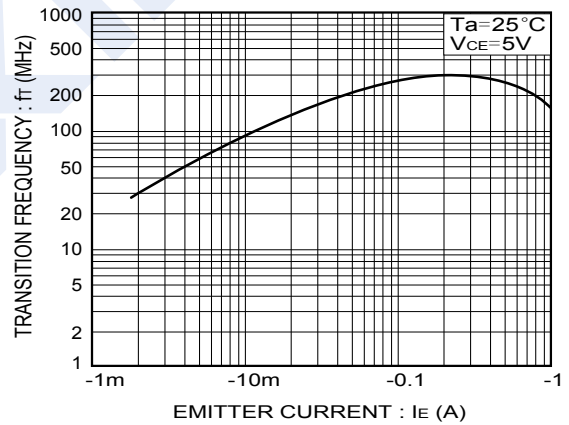


Fig.4 Gain bandwidth product vs. emitter current

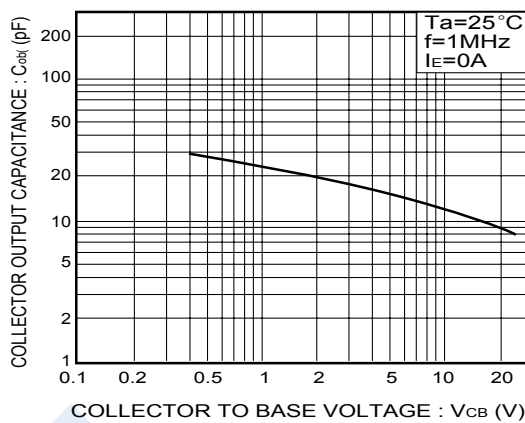


Fig.5 Collector output capacitance vs. collector-base voltage

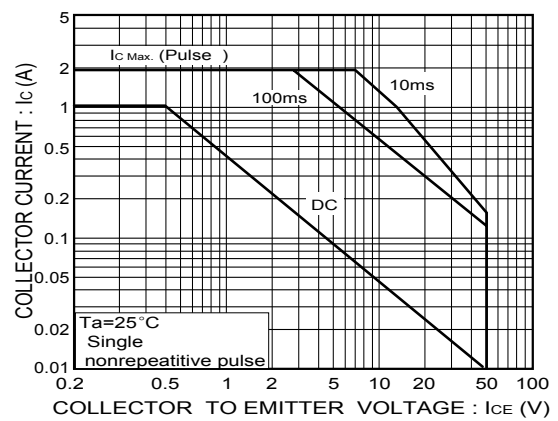


Fig.6 Safe operating area