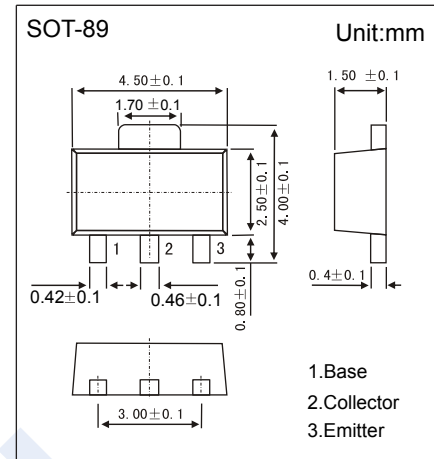


NPN Transistors

2SD2185

■ Features

- Collector Current Capability $I_c=3A$
- Collector Emitter Voltage $V_{CE0}=50V$
- Complementary to 2SB1440



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	50	V
Collector - Emitter Voltage	V_{CEO}	50	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_c	3	A
Collector Current - Pulse	I_{CP}	4	
Collector Power Dissipation	P_c	1	W
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_c = 100 \mu A, I_E = 0$	50			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}	$V_{CB} = 50 V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 V, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 1 A, I_B = 50 mA$			0.3	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 1 A, I_B = 50 mA$			1.2	
DC current gain	h_{FE}	$V_{CE} = 2 V, I_c = 200 mA$	120		340	
		$V_{CE} = 2 V, I_c = 1 A$	80			
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$			35	pF
Transition frequency	f_T	$V_{CB} = 10 V, I_E = -50 mA, f = 200 MHz$		110		MHz

■ Classification of $h_{fe}(1)$

Type	2SD2185-R	2SD2185-S
Range	120-240	170-340
Marking	1HR	1HS

NPN Transistors

2SD2185

Typical Characteristics

