

NPN Transistors

2SD2413

■ Features

- Collector Current Capability $I_C=100\text{mA}$
- Collector Emitter Voltage $V_{CEO}=400\text{V}$

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

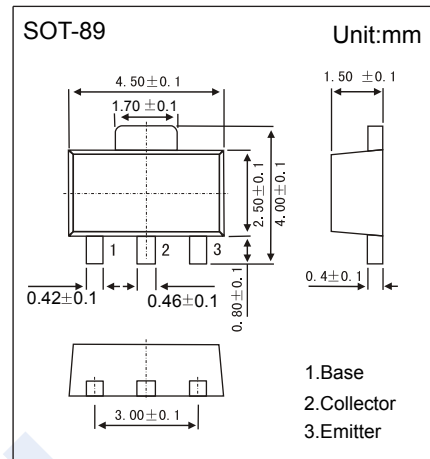
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	400	V
Collector - Emitter Voltage	V_{CEO}	400	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	100	mA
Collector Current - Pulse	I_{CP}	200	
Collector Power Dissipation	P_C	1	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100\text{ }\mu\text{A}, I_E = 0$	400			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 500\text{ }\mu\text{A}, I_B = 0$	400			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100\text{ }\mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 400\text{ V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$			1.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$			1.5	
DC current gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 30\text{mA}$	2000		30000	
Collector output capacitance	C_{ob}	$V_{CB} = 30\text{V}, I_E = 0, f = 1\text{MHz}$			7	pF
Transition frequency	f_T	$V_{CB} = 30\text{V}, I_E = -20\text{mA}, f = 200\text{MHz}$		40		MHz

■ Marking

Marking	1S
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■ Typical Characteristics

