

FEATURES

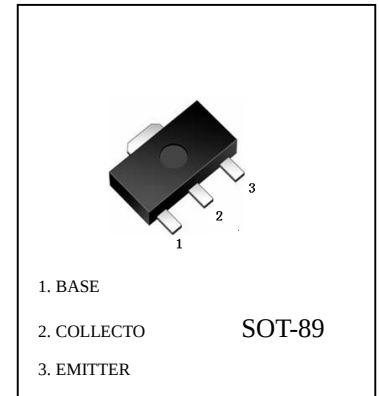
- High collector to base voltage V_{CBO}
- High collector to emitter voltage V_{CEO}
- Large collector power dissipation P_C
- Low collector to emitter saturation voltage $V_{CE(sat)}$

Marking: 1S

Maximum Ratings ($T_a=25\text{ }^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	400	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	100	mA
Collector Power dissipation	P_C	0.5	W
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55to +150	$^{\circ}\text{C}$

2SD2413 (NPN)



ELECTRICAL CHARACTERISTICS (@ $T_a=25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C=100\mu\text{A}$, $I_E=0$	400			V
Collector-emitter breakdown voltage	V_{CEO}	$I_C=0.5\text{mA}$, $I_B=0$	400			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=100\mu\text{A}$, $I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=400\text{V}$, $I_E=0$			50	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$			50	μA
DC current gain	h_{FE}	$V_{CE}=5\text{V}$, $I_C=30\text{mA}$	30			
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	V
Transition frequency	f_T	$V_{CE}=30\text{V}$, $I_C=20\text{mA}$, $f=200\text{MHz}$		40		MHz
Collector output capacitance	C_{ob}	$V_{CB}=30\text{V}$, $I_E=0$, $f=1\text{MHz}$			7	pF

2SD2413 Typical Characteristics

