2SD2413 TRANSISTOR (NPN)

1.BASE
2.COLLECTOR
3.EMITTER

SOT-89

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℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	100	mA
P_C	Collector Power Dissipation	500	mW
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=0.5mA, I_B=0	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=400V, I_E=0			50	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0			50	μA
DC current gain	h_{FE}	V_{CE}=5V, I_C=30mA	30			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA, I_B=5mA			1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=50mA, I_B=5mA			1.5	V
Transition frequency	f_T	V_{CE}=30V, I_C=20mA, f=200MHz		40		MHz
Collector output capacitance	C_{ob}	V_{CB} = 30V, I_E=0, f=1MHz			7	pF