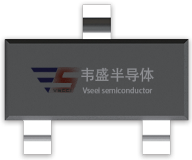
2SD1306 TRANSISTOR (NPN)



1.BASE

2.COLLECTOR

3.EMITTER

SOT-23-3

ApplicationLow

- frequency amplifier, Muting

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector -Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	15	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Continuous Collector Current	0.7	A
P_C	Collector Dissipation	0.15	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	833	℃/ W
T_J,T_{stg}	Junction Temperature	-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=10uA,I_E=0	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	15			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10uA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=20V,I_E=0			1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			1	uA
DC current gain	h_{FE}*	V_{CE}=1V,I_C=150mA	250		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	I_C=500mA,I_B=50mA			0.5	V
Base-emitter voltage	V_{BE} *	V_{CE}=1V,I_C=150mA			1	V
Transition frequency	f_T*	V_{CE}=1V,f=150MHz		250		MHz

* Pulse test: Pulse Width ≤300μs, Duty Cycle≤ 2.0%.

CLASSIFICATION of h_{FE}

Rank	D	E
Range	250-500	400-800
Marking	ND	NE