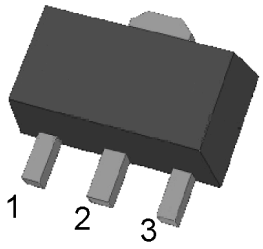
SXT5401

High Voltage Transistors

SOT-89

DESCRIPTION & FEATURES

High Collector Breakdown Voltage： (V_{CBO}=-160V, V_{CEO}=-150V)
Low Leakage Current：(I_{CBO}=-50nA(Max.), @V_{CB}=-120V)
Low Saturation Voltage：$V_{CE(sat)}$=-0.5V(Max.), @I_C=-50mA, I_B=-5mA
Low Noise：NF=8bB(Max.)



PIN ASSIGNMENT

PIN NAME	PIN NUMBER	FUNCTION
	SOT-89	
B	1	BASE
C	2	COLLECTOR
E	3	EMITTER

DEVICE MARKING：SXT5401=2L

MAXIMUM RATINGS(T_a=25℃)

CHARACTERISTIC	Symbol	Rating	Unit
Collector- Emitter Voltage	V_{CEO}	-150	Vdc
Collector-Base Voltage	V_{CBO}	-160	Vdc
Emitter-Base Voltage	V_{EBO}	-5.0	Vdc
Collector Current	I_C	-0.5	Adc

THERMAL CHARACTERISTICS

CHARACTERISTIC	Symbol	Max	Unit
Total power dissipation （Tamb • 25C;note1）	P_D	0.5	W
Junction and Storage Temperature	T_j, T_{stg}	150， -55~150	℃
Operating ambient temperature	Tamb	-55~150	℃
Thermal resistance from junction to ambient	$R_{th\ j\text{-}a}$	250	℃/W

SMALL-SIGNAL CHARA CTERISTICS

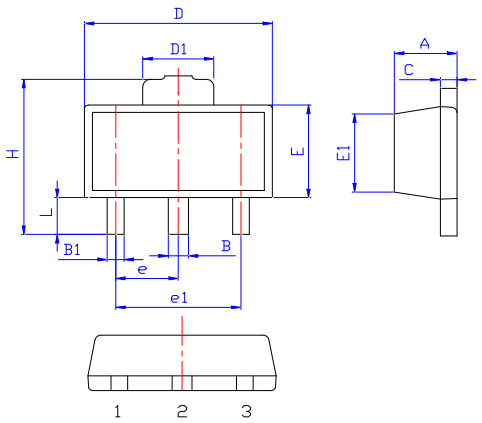
Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Transition Frequency	fT	V_{CE}=-10V,I_E=-10mA, f=100MH_Z	100	—	300	MH_Z
Collector Output Capacitance	C_{ob}	V_{CB}=-10V,I_E=0, f=1MH_Z	—	—	6	pF
Noise Figure	NF	R_S=10Ω,f=10H_Z to15.7K H_Z V_{CE}=-5.0Vdc，I_C=-200μAdc	—	—	8.0	dB

ELECTRICAL CHARACTERISTICS (T$_A$=25℃ unless otherwise noted)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Collector cut-off current	I_{CBO}	V_{CB} =-120Vdc, I_E=0	—	-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-4.0Vdc,I_C=0	—	-50	nA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	Ic=-1.0 mAdc, I_B=0	-150	—	Vdc
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	Ic=-100 μ Adc, I_E=0	-160	—	Vdc
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10 μ Adc, I_C=0	-5.0	—	Vdc
DC current gain	h_{FE}	Ic=-1.0mAdc,V_{CE}=-5.0Vdc	50	—	—
		Ic=-10mAdc,V_{CE}=-5.0Vdc	60	360	—
		Ic=-50mAdc,V_{CE}=-5.0Vdc	50	—	—
Collector-emitter saturation voltage	V_{CEsat}	Ic=-10mAdc,I_B=-1.0mAdc	—	-0.2	Vdc
		Ic=-50mAdc,I_B =5.0mAdc	—	-0.5	Vdc
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	Ic=-10mAdc,I_B=-1.0mAdc	—	-1.0	Vdc
		Ic=-50mAdc, I_B =5.0mAdc	—	-1.0	Vdc

SOT-89

（SOT-89 DIMENSION）



DIM	MILLIMETERS	
	MIN.	MAX.
A	1.40	1.60
B	0.46	0.56
B1	0.36	0.48
C	0.35	0.44
D	4.40	4.60
D1	1.62	1.83
E	2.29	2.60
E1	---	---
e	1.50REF	
e1	3.00REF	
H	3.94	4.25
L	0.89	1.20