

High Voltage Transistors

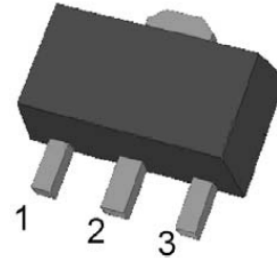
SOT-89

DESCRIPTION & FEATURES

High Breakdown Voltage($BV_{CEO}=300V$)

PIN ASSIGNMENT

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



MAXIMUM RATINGS($T_a=25^\circ C$)

CHARACTERISTIC	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	-300	Vdc
Collector-Base Voltage	V_{CBO}	-300	Vdc
Emitter-Base Voltage	V_{EBO}	-5.0	Vdc
Collector Current—Continuous	I_C	-500	mAdc

THERMAL CHARACTERISTICS

CHARACTERISTIC	Symbol	Max	Unit
Total Device Dissipation ($T_a=25^\circ C$)	P_D	500	mW
Derate above $25^\circ C$		1.8	mW/ $^\circ C$
Thermal Resistance Junction to Ambient	R_{JA}	250	$^\circ C/W$
Junction and Storage Temperature	$T_j,$ T_{stg}	150, -55 to +150	$^\circ C$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$ unless otherwise noted)

Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = -200Vdc,$	—	—	-250	nAdc
Emitter-Cutoff Current	I_{EBO}	$V_{EB} = -3.0Vdc,$	—	—	-100	nAdc
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_c = -1.0 mAdc,$	-300	—	—	Vdc
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_c = -100 \mu Adc,$	-300	—	—	Vdc
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100 \mu Adc,$	-5.0	—	—	Vdc

DC Current Gain	$h_{FE(1)}$	$I_C = -10\text{mA dc}$, $V_{CE} = -10\text{V dc}$	40	—	—	—
	$h_{FE(2)}$	$I_C = -30\text{mA dc}$, $V_{CE} = -10\text{V dc}$	25	—	—	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -20\text{mA dc}$, $I_B = -2.0\text{mA dc}$	—	—	-0.5	Vdc
Base-Emitter On Voltage	$V_{BE(sat)}$	$I_C = -20\text{mA dc}$, $I_B = -2.0\text{mA dc}$	—	—	-0.9	Vdc
Current-Gain-Bandwidth Product	f_T	$I_C = -10\text{mA dc}$, $V_{CE} = -20\text{V dc}$ $f = 30\text{MHz}$	50	—	—	MHz