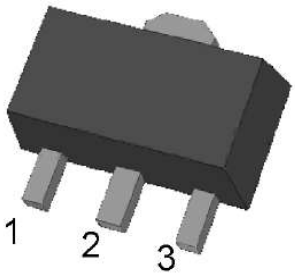
SXTA42

High Voltage Transistors **SOT-89**

DESCRIPTION & FEATURES

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



PIN ASSIGNMENT

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

MAXIMUM RATINGS(T_a=25℃)

CHARACTERISTIC	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CEO}	300	Vdc
Collector-Base Voltage	V_{CBO}	300	Vdc
Emitter-Base Voltage	V_{EBO}	6.0	Vdc
Collector Current-Continuous	I_C	500	mAdc

THERMAL CHARACTERISTICS

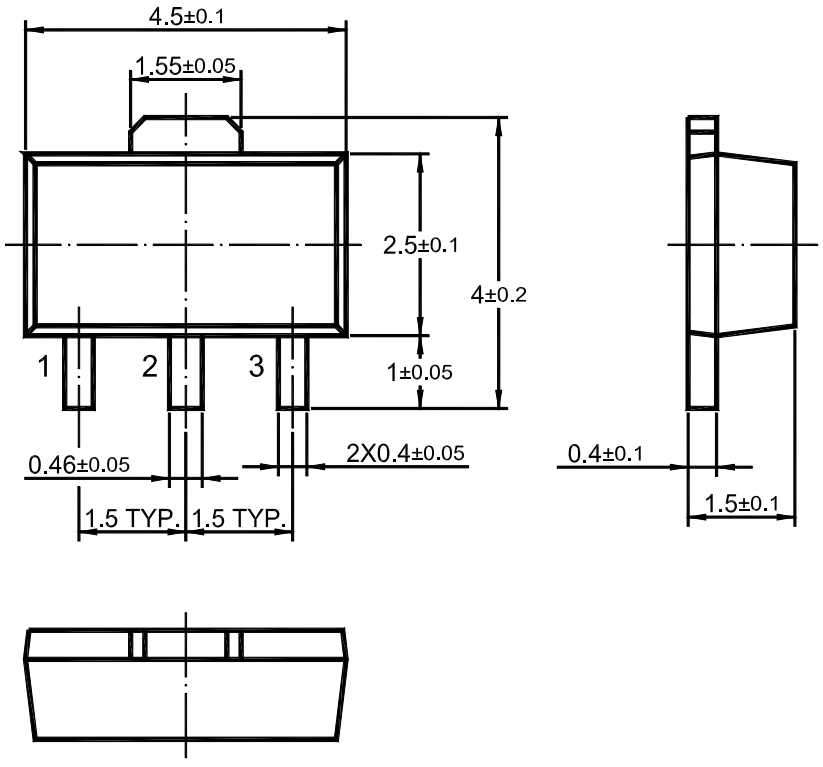
CHARACTERISTIC	Symbol	Max	Unit
Total Device Dissipation (T_A=25℃)	P_D	500	mW
Thermal Resistance Junction to Ambient	R_{JA}	250	℃/W
Junction and Storage Temperature	T_j, T_{stg}	150, -55 to +150	℃

ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise noted)

Characteristic	Symbol	Test Condition	Min	Type	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB} =200Vdc, I_E=0	—	—	100	nAdc
Emitter Cutoff Current	I_{EBO}	V_{EB}=6.0Vdc, I_C=0	—	—	100	nAdc
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	Ic=1.0 mAdc, I_B=0	300	—	—	Vdc
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	Ic=100 μ Adc, I_E=0	300	—	—	Vdc
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=100 μ Adc, I_C=0	6.0	—	—	Vdc
DC Current Gain	h_{FE}(1)	Ic=1.0mAdc, V_{CE}=10Vdc	25	—	—	—
	h_{FE}(2)	Ic=10mAdc, V_{CE}=10Vdc	40	—	—	—

	$h_{FE}(3)$	Ic=30mAdc, V_{CE}=10Vdc	40	—	—	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	Ic=20mAdc, I_B=2.0mAdc	—	—	0.5	Vdc
Base-Emitter On Voltage	$V_{BE(sat)}$	Ic=20mAdc, I_B=2.0mAdc	—	—	0.9	Vdc
Current-Gain-Bandwidth Product	f_T	Ic=10mAdc, V_{CE}=20Vdc f=30MHz	50	—	—	MHz

SOT-89 PACKAGE OUTLINE



Dimensions in mm