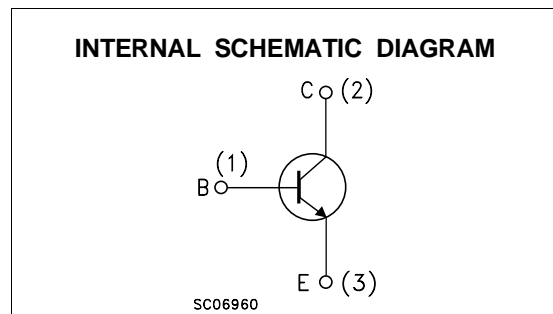
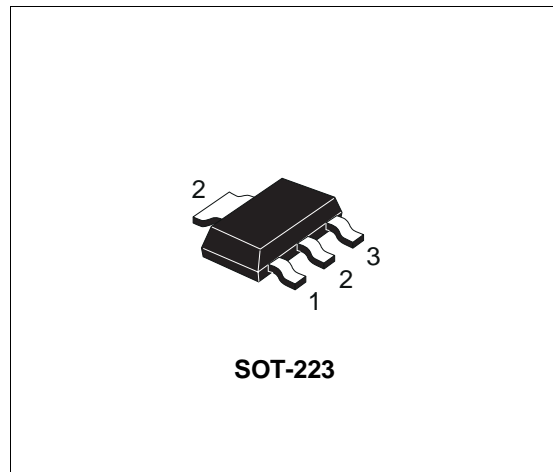


MEDIUM POWER AMPLIFIER

ADVANCE DATA

- SILICON EPITAXIAL PLANAR NPN TRANSISTORS
- MINIATURE PLASTIC PACKAGE FOR APPLICATION IN SURFACE MOUNTING CIRCUITS
- GENERAL PURPOSE MAINLY INTENDED FOR USE IN MEDIUM POWER INDUSTRIAL APPLICATION AND FOR AUDIO AMPLIFIER OUTPUT STAGE
- PNP COMPLEMENTS ARE STZT2222 AND STZT2222A RESPECTIVELY



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		STZT2907	STZT2907A	
V _{CB0}	Collector-Base Voltage (I _E = 0)	-60	-60	V
V _{CEO}	Collector-Emitter Voltage (I _B = 0)	-40	-60	V
V _{EB0}	Emitter-Base Voltage (I _C = 0)	-5		V
I _C	Collector Current	-0.8		A
P _{tot}	Total Dissipation at T _c = 25 °C	-1.5		W
T _{stg}	Storage Temperature	-65 to 150		°C
T _j	Max. Operating Junction Temperature	150		°C

STZT2907/STZT2907A

THERMAL DATA

R _{thj-amb} •	Thermal Resistance Junction-Ambient	Max	83.3	°C/W
R _{thj-tab} •	Thermal Resistance Junction-Colecor Tab	Max	10	°C/W

• Mounted on a ceramic substrate area = 30 x 35 x 0.7 mm

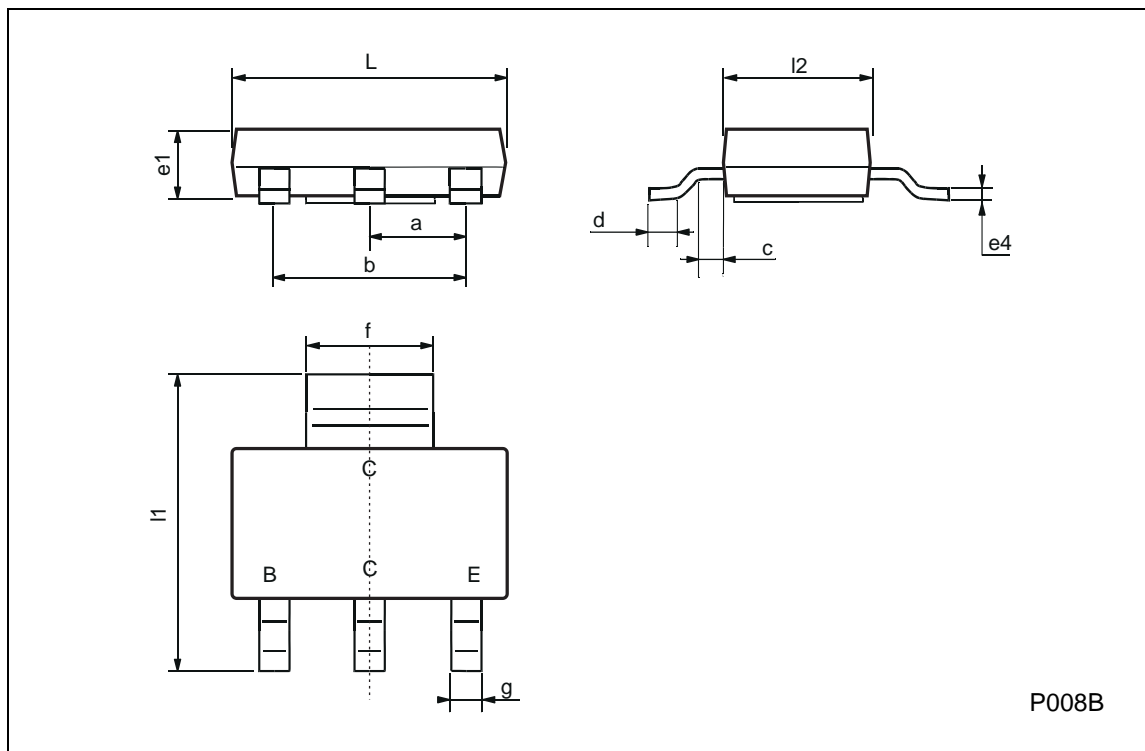
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = rated V _{CB0} V _{CB} = rated V _{CB0} T _{amb} = 125 °C			-20 -10	nA μA
I _{CEX}	Collector Cut-off Current (V _{BE} = 0.5V)	V _{CE} = -30 V for STZT2222A			-50	nA
I _{BEX}	Base Cut-off Current (V _{BE} = 0.5V)	V _{CE} = -30 V for STZT2222A			-50	nA
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _E = 0)	I _C = -10 μA	-60			V
V _{(BR)CEO*}	Collector-Emitter Breakdown Voltage (I _B = 0)	I _C = -10 mA for STZT2907 for STZT2907A	-40 -60			V V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _C = 0)	I _E = -10 μA	-5			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = -150 mA I _B = -15 mA I _C = -500 mA I _B = -50 mA			-0.4 -1.6	V V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = -150 mA I _B = -15 mA I _C = -500 mA I _B = -50 mA			-1.3 -2.6	V V
h _{FE*}	DC Current Gain	I _C = -0.1 mA V _{CE} = -10 V for STZT2907 for STZT2907A I _C = -1 mA V _{CE} = -10 V for STZT2907 for STZT2907A I _C = -10 mA V _{CE} = -10 V for STZT2907 for STZT2907A I _C = -150 mA V _{CE} = -10 V I _C = -500 mA V _{CE} = -10 V for STZT2907 for STZT2907A	35 75 50 100 75 100 100 10 50		300	
f _T	Transition Frequency	I _C = -10 mA V _{CE} = -10 V f = 100 MHz	200			MHz
C _{CBO}	Collector-Base Capacitance	I _E = 0 V _{CB} = -10 V f = 1 MHz			8	pF
C _{EBO}	Emitter-Base Capacitance	I _C = 0 V _{EB} = -2 V f = 1 MHz			30	pF
t _d	Delay Time	I _C = -150 mA I _{B1} = -15 mA V _{CC} = -30 V			10	ns
t _r	Rise Time				40	ns
t _{on}	Turn-on Time				45	ns
t _s	Storage Time	I _C = -150 mA I _{B1} = -I _{B1} = -15 mA V _{CC} = -30 V			80	ns
t _f	Fall Time				30	ns
t _{off}	Turn-off Time				100	ns

* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 1.5 %

SOT223 MECHANICAL DATA

DIM.	mm			mils		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
a	2.27	2.3	2.33	89.4	90.6	91.7
b	4.57	4.6	4.63	179.9	181.1	182.3
c	0.2	0.4	0.6	7.9	15.7	23.6
d	0.63	0.65	0.67	24.8	25.6	26.4
e1	1.5	1.6	1.7	59.1	63	66.9
e4			0.32			12.6
f	2.9	3	3.1	114.2	118.1	122.1
g	0.67	0.7	0.73	26.4	27.6	28.7
l1	6.7	7	7.3	263.8	275.6	287.4
l2	3.5	3.5	3.7	137.8	137.8	145.7
L	6.3	6.5	6.7	248	255.9	263.8



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