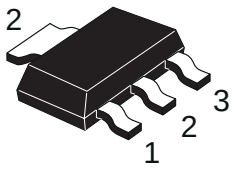
STF817
STN817

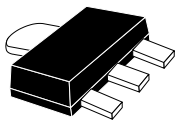
PNP MEDIUM POWER TRANSISTORS

Type	Marking
STF817	817
STN817	N817

- SURFACE-MOUNTING DEVICES IN MEDIUM POWER SOT-223 AND SOT-89 PACKAGES
- AVAILABLE IN TAPE & REEL PACKING



SOT-223

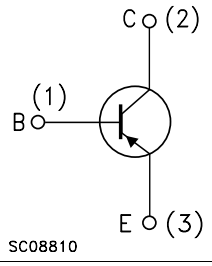


SOT-89

APPLICATIONS
- VOLTAGE REGULATION
- RELAY DRIVER
- GENERIC SWITCH

DECRIPTION
The STF817 and STN817 are PNP transistors manufactured using Planar Technology resulting in rugged high performance devices.

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
	Devices	STN817	STF817	
	Packages	SOT-223	SOT-89	
V_{CBO}	Collector-Base Voltage (I_E = 0)	-120		V
V_{CEO}	Collector-Emitter Voltage (I_B = 0)	-80		V
V_{EBO}	Emitter-Base Voltage (I_C = 0)	-5		V
I_C	Collector Current	-1.5		A
I_{CM}	Collector Peak Current (t_p < 5 ms)	-2		A
I_B	Base Current	-0.3		A
I_{BM}	Base Peak Current (t_p < 5 ms)	-0.6		A
P_{tot}	Total Dissipation at T_c = 25 °C	1.6	1.4	W
T_{stg}	Storage Temperature	-65 to 150		°C
T_j	Max. Operating Junction Temperature	150		°C

THERMAL DATA

			SOT-223	SOT-89	
$R_{thj\text{-}amb}$ •	Thermal Resistance Junction-ambient	Max	78	89	°C/W

• Device mounted on a PCB area of 1 cm^2.

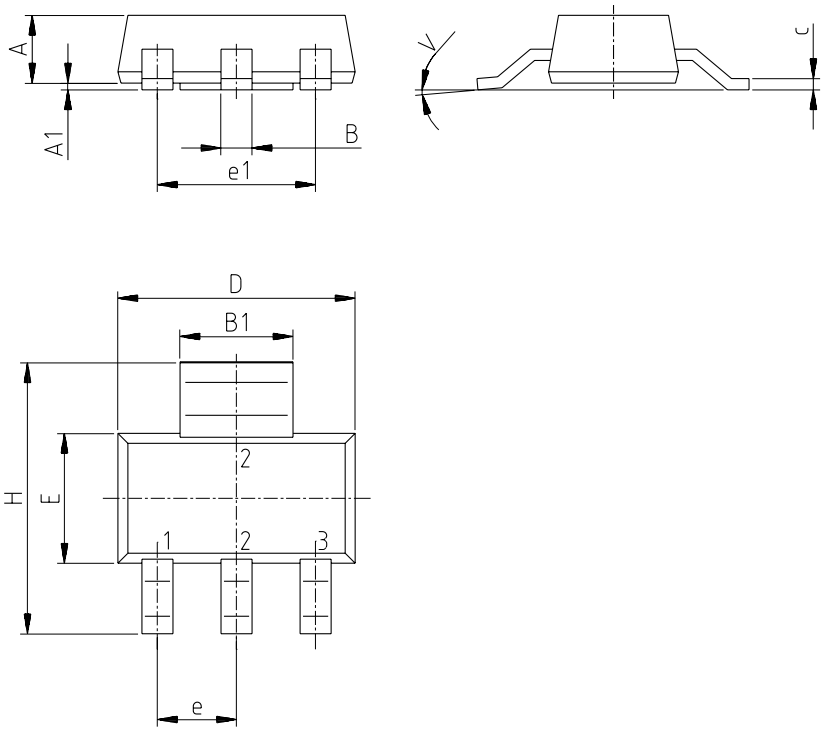
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CES}	Collector Cut-off Current (V_{BE} = 0)	V_{CE} = -120 V				-500	µA
I_{CEO}	Collector Cut-off Current (I_B = 0)	V_{CE} = -80 V				-1	mA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = -5 V				-100	µA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = -10 mA		-80			V
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = -100 mA I_C = -1 A	I_B = -10 mA I_B = -100 mA			-0.25 -0.5	V V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C = -100 mA I_C = -1 A	I_B = -10 mA I_B = -100 mA			-1 -1.1	V V
h_{FE}*	DC Current Gain	I_C = -100 mA I_C = -500 mA I_C = -1 A	V_{CE} = -2 V V_{CE} = -2 V V_{CE} = -2 V	140 80 40			
f_T	Transition Frequency	I_C = -0.1 A	V_{CE} = -10 V		50		MHz

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

SOT-223 MECHANICAL DATA

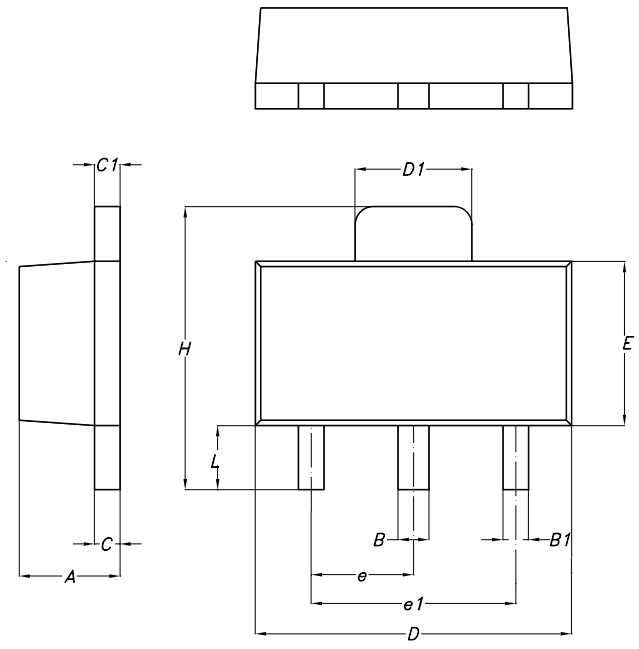
DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A			1.80			0.071
B	0.60	0.70	0.80	0.024	0.027	0.031
B1	2.90	3.00	3.10	0.114	0.118	0.122
c	0.24	0.26	0.32	0.009	0.010	0.013
D	6.30	6.50	6.70	0.248	0.256	0.264
e		2.30			0.090	
e1		4.60			0.181	
E	3.30	3.50	3.70	0.130	0.138	0.146
H	6.70	7.00	7.30	0.264	0.276	0.287
V			10^o			10^o
A1		0.02				



P008B

SOT-89 MECHANICAL DATA

DIM.	mm			mils		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	1.4		1.6	55.1		63.0
B	0.44		0.56	17.3		22.0
B1	0.36		0.48	14.2		18.9
C	0.35		0.44	13.8		17.3
C1	0.35		0.44	13.8		17.3
D	4.4		4.6	173.2		181.1
D1	1.62		1.83	63.8		72.0
E	2.29		2.6	90.2		102.4
e	1.42		1.57	55.9		61.8
e1	2.92		3.07	115.0		120.9
H	3.94		4.25	155.1		167.3
L	0.89		1.2	35.0		47.2



P025H