

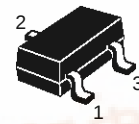


SO2907
SO2907A

SMALL SIGNAL PNP TRANSISTORS

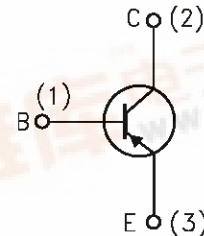
Type	Marking
SO2907	P05
SO2907A	P03

- SILICON EPITAXIAL PLANAR PNP TRANSISTORS
- MINIATURE PLASTIC PACKAGE FOR APPLICATION IN SURFACE MOUNTING CIRCUITS
- MEDIUM CURRENT AF AMPLIFICATION AND SWITCHING
- NPN COMPLEMENTS ARE RESPECTIVELY SO2907 AND SO2907A



SOT-23

INTERNAL SCHEMATIC DIAGRAM



SC08810

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value		Unit
		SO2907	SO2907A	
V_{CBO}	Collector-Emitter Voltage ($V_{BE} = 0$)	-60	-60	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	-40	-60	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	-5		V
I_{CM}	Collector Peak Current	-0.8		A
P_{tot}	Total Dissipation at $T_c = 25^\circ\text{C}$	350		mW
T_{stg}	Storage Temperature	-65 to 150		$^\circ\text{C}$
T_j	Max. Operating Junction Temperature	150		$^\circ\text{C}$

SO2907/SO2907A

THERMAL DATA

R _{thj-amb} •	Thermal Resistance Junction-Ambient	Max	350	°C/W
R _{thj-SR} •	Thermal Resistance Junction-Substrate	Max	290	°C/W

• Mounted on a ceramic substrate area = 15 x 15 x 0.7 mm

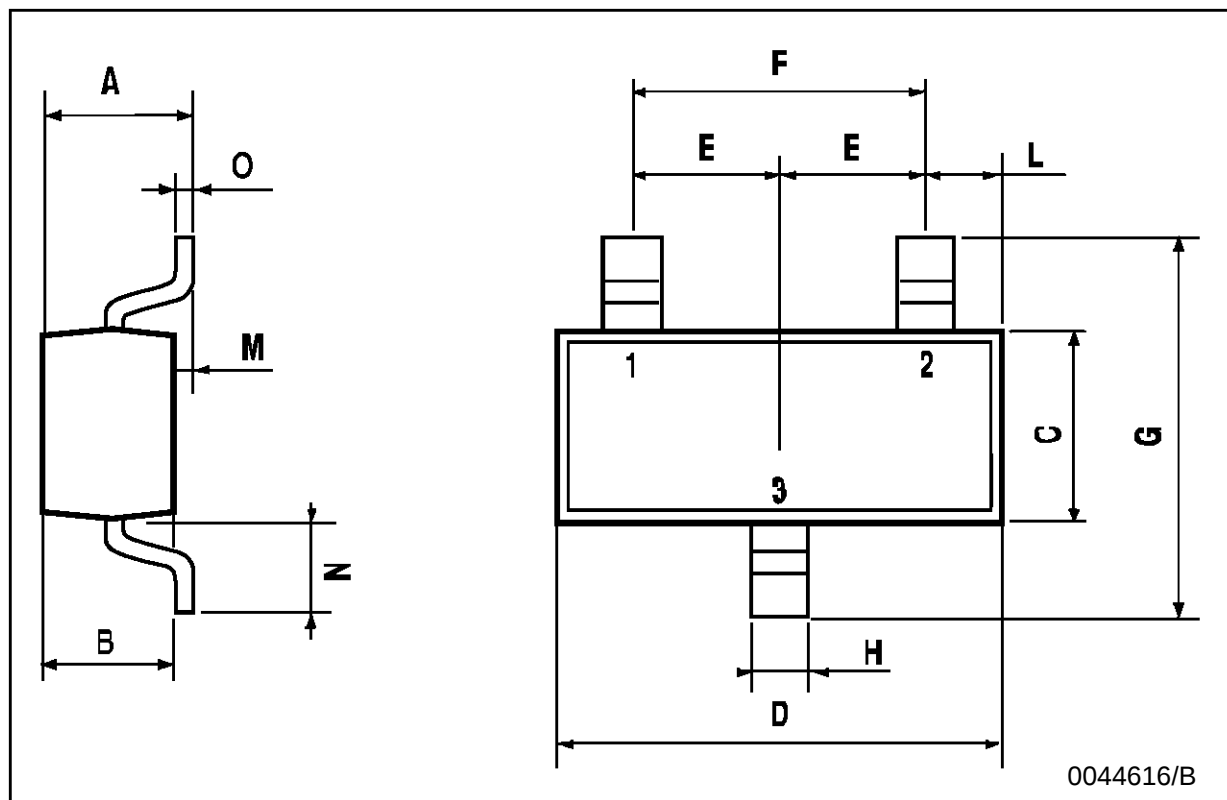
ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CEX}	Collector Cut-off Current	V _{CE} = -30 V V _{BE} = -3 V			-50	nA
I _{BEX}	Base Cut-off Current	V _{CE} = -30 V V _{BE} = -3 V			-50	nA
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = -50 V for SO2907 for SO2907A			-20 -10	nA nA
V _{(BR)CEO} *	Collector-Emitter Breakdown Voltage (I _B = 0)	I _C = -10 mA for SO2907 for SO2907A	-40 -60			V V
V _{(BR)CBO} *	Collector-Base Breakdown Voltage (I _B = 0)	I _C = -10 µA	-60			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)} *	Collector-Base 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 SO2907 for SO2907A I _C = -1 mA V _{CE} = -10 V for SO2907 for SO2907A I _C = -10 mA V _{CE} = -10 V for SO2907 for SO2907A I _C = -150 mA V _{CE} = -10 V	35 75 50 100 75 100 100		300	
f _T	Transition Frequency	I _C = -50 mA V _{CE} = -20V f = 100MHz	200			MHz
C _{CB}	Collector Base Capacitance	I _E = 0 V _{CB} = -10 V f = 1 MHz			8	pF
C _{EB}	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			10	ns
t _r	Rise Time				40	ns
t _{on}	Switching On Time				45	ns
t _s	Storage Time	I _C = -150 mA I _{B1} = -I _{B2} = -15mA			80	ns
t _f	Fall Time				30	ns
t _{off}	Switching Off Time				100	ns

* Pulsed: Pulse duration = 300 µs, duty cycle ≤ 2 %

SOT-23 MECHANICAL DATA

DIM.	mm			mils		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	0.85		1.1	33.4		43.3
B	0.65		0.95	25.6		37.4
C	1.20		1.4	47.2		55.1
D	2.80		3	110.2		118
E	0.95		1.05	37.4		41.3
F	1.9		2.05	74.8		80.7
G	2.1		2.5	82.6		98.4
H	0.38		0.48	14.9		18.8
L	0.3		0.6	11.8		23.6
M	0		0.1	0		3.9
N	0.3		0.65	11.8		25.6
O	0.09		0.17	3.5		6.7



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