SGS-THOMSON MICROELECTRONICS

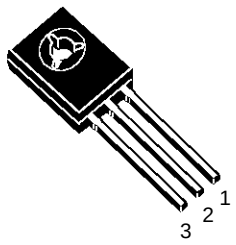
2N4918
2N4919/2N4920

MEDIUM POWER PNP SILICON TRANSISTOR

- 2N4918 AND 2N4920 ARE SGS-THOMSON PREFERRED SALESTYPES

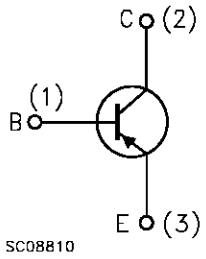
DESCRIPTION

The 2N4918, 2N4919 and 2N4920 are silicon epitaxial planar PNP transistors in Jedec SOT-32 plastic package, intended for driver circuits switching and amplifier applications.



SOT-32

INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit
		2N4918	2N4919	2N4920	
V_{CBO}	Collector-Base Voltage (I_E = 0)	-40	-60	-80	V
V_{CEO}	Collector-Emitter Voltage (I_B = 0)	-40	-60	-80	V
V_{EBO}	Emitter-Base Voltage (I_C = 0)	-5			V
I_C	Collector Current	-1			A
I_{CM}	Collector Peak Current	-3			A
I_B	Base Current	-1			A
P_{tot}	Total Dissipation at $T_c \leq 25\ ^oC$	30			W
T_{stg}	Storage Temperature	-65 to 150			^oC
T_j	Max. Operating Junction Temperature	150			^oC

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	4.16	$^oC/W$

ELECTRICAL CHARACTERISTICS (T_{case} = 25 ^oC unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current (I_E = 0)	V_{CE} = rated V_{CEO}			-100	µA
I_{CEX}	Collector Cut-off Current (V_{BE} = -1.5V)	V_{CE} = rated V_{CEO} V_{CE} = rated V_{CEO} T_C = 125 ^oC			-100 -500	µA µA
I_{CEO}	Collector Cut-off Current (I_B = 0)	for **2N4918** V_{CB} = -20 V for **2N4919** V_{CB} = -30 V for **2N4920** V_{CB} = -40 V			-500 -500 -500	µA µA µA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = -5 V			-1	mA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage	I_C = -10 mA for **2N4918** for **2N4919** for **2N4920**	 -40 -60 -80			 V V V
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = -1 A I_B = -0.1 A			-0.6	V
$V_{BE(sat)}$*	Base-Emitter Saturation Voltage	I_C = -1 A I_B = -0.1 A			-1.3	V
V_{BE}*	Base-Emitter Voltage	I_C = -1 A V_{CE} = -1 V			-1.3	V
h_{fe}	Small Signal Current Gain	I_C = -250 mA V_{CE} = -10 V f = 1KHz	25			
f_T	Transition frequency	I_C = -250 mA V_{CE} = -10 V f = 1MHz	3			MHz
C_{CBO}	Collector Base Capacitance	I_E = 0 V_{CB} = -10 V f = 1KHz			100	pF

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

SOT-32 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	7.4		7.8	0.291		0.307
B	10.5		10.8	0.413		0.445
b	0.7		0.9	0.028		0.035
b1	0.49		0.75	0.019		0.030
C	2.4		2.7	0.04		0.106
c1		1.2			0.047	
D		15.7			0.618	
e		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
G	3		3.2	0.118		0.126
H			2.54			0.100