

EPITAXIAL PLANAR NPN

2N 4910
2N 4911
2N 4912

MEDIUM POWER GENERAL PURPOSE TRANSISTORS

The 2N4910, 2N4911 and 2N4912 are silicon epitaxial planar NPN transistors in Jedec TO-66 metal case.

They are intended for use in switching and amplifier applications.

The complementary PNP types are the 2N4898, 2N4899 and 2N4900 respectively.

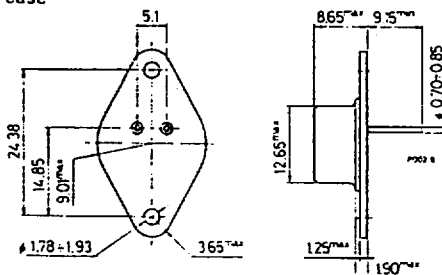
ABSOLUTE MAXIMUM RATINGS

		2N4910	2N4911	2N4912
V_{CBO}	Collector-base voltage ($I_E = 0$)	40V	60V	80V
V_{CEO}	Collector-emitter voltage ($I_B = 0$)	40V	60V	80V
V_{EBO}	Emitter-base voltage ($I_C = 0$)		5V	
I_C	Collector current		4A	
I_B	Base current		1A	
P_{tot}	Total power dissipation at $T_{case} \leq 25^\circ C$		25W	
T_{stg}	Storage temperature		-65 to 200°C	
T_j	Junction temperature		200°C	

MECHANICAL DATA

Dimensions in mm

Collector connected to case



TO-66

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THERMAL DATA

$R_{th\ j-case}$	Thermal resistance junction-case	max	7	$^{\circ}C/W$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise specified)

Parameter	Test conditions	Min.	Typ.	Max.	Unit
I_{CBO} Collector cutoff current ($I_E = 0$)	for 2N4910 $V_{CB} = 40V$ for 2N4911 $V_{CB} = 60V$ for 2N4912 $V_{CB} = 80V$			0.1 0.1 0.1	mA mA mA
I_{CEV} Collector cutoff current ($V_{BE} = -1.5V$)	for 2N4910 $V_{CE} = 40V$ for 2N4911 $V_{CE} = 60V$ for 2N4912 $V_{CE} = 80V$ $T_{case} = 150^{\circ}C$ for 2N4910 $V_{CE} = 40V$ for 2N4911 $V_{CE} = 60V$ for 2N4912 $V_{CE} = 80V$			0.1 0.1 0.1 1 1 1	mA mA mA mA mA mA
I_{CEO} Collector cutoff current ($I_B = 0$)	for 2N4910 $V_{CE} = 20V$ for 2N4911 $V_{CE} = 30V$ for 2N4912 $V_{CE} = 40V$			0.5 0.5 0.5	mA mA mA
I_{EBC} Emitter cutoff current ($I_C = 0$)	$V_{BE} = -5.0V$			1	mA
$V_{CE0(sus)}$ * Collector-emitter sustaining voltage ($I_E = 0$)	$I_C = 0.1A$ for 2N4910 for 2N4911 for 2N4912	40 60 80			V V V

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ELECTRICAL CHARACTERISTICS (continued)

Parameter	Test conditions	Min.	Typ.	Max.	Unit
$V_{CE(sat)}$ * Collector-emitter saturation voltage	$I_C = 1A$ $I_B = 0.1A$		0.6		V
$V_{BE(sat)}$ * Base-emitter saturation voltage	$I_C = 1A$ $I_B = 0.1A$		1.3		V
V_{BE} * Base-emitter voltage	$I_C = 1A$ $V_{CE} = 1V$		1.3		V
h_{FE} * DC current gain	$I_C = 50mA$ $V_{CE} = 1V$ $I_C = 500mA$ $V_{CE} = 1V$ $I_C = 1A$ $V_{CE} = 1V$	40 20 10	100		— — —
f_T Transition frequency	$I_C = 250mA$ $V_{CE} = 10V$ $f = 1MHz$	3			MHz
C_{CB0} Collector-base capacitance	$I_E = 0$ $V_{CB} = 10V$ $f = 100KHz$		100		pF
h_{fe} Small signal current gain	$I_C = 250mA$ $V_{CE} = 10V$ $f = 1KHz$	25			—

* Pulsed: pulse duration = 300 μ s, duty cycle \leq 2%.