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2N4915 (SILICON)

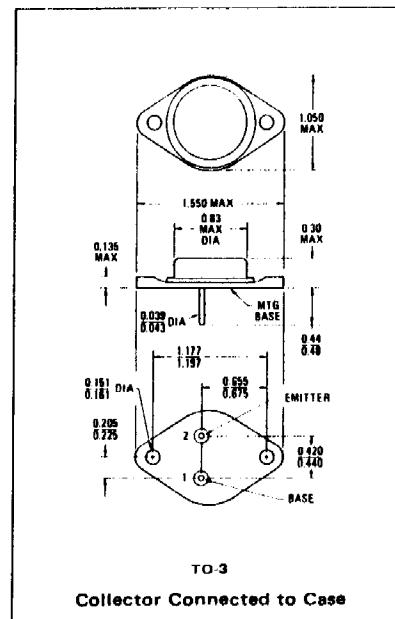
NPN power transistors for use in power amplifier and switching circuits. Complement to PNP 2N4906.

MAXIMUM RATINGS

Rating	Symbol	2N4915	Unit
Collector-Emitter Voltage	V_{CEO}	80	Vdc
Collector-Base Voltage	V_{CB}	80	Vdc
Emitter-Base Voltage	V_{EB}	5.0	Vdc
Collector Current - Continuous	I_C	5.0	Adc
Base Current - Continuous	I_B	1.0	Adc
Total Device Dissipation @ $T_c = 25^\circ\text{C}$	P_D	87.5	Watts
Derate above 25°C		0.5	W/ $^\circ\text{C}$
Operating & Storage Junction Temperature Range	T_J, T_{sig}	-65 to +200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	θ_{JC}	2.0	$^\circ\text{C}/\text{W}$



ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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OFF CHARACTERISTICS

Collector-Emitter Sustaining Voltage (1) ($I_C = 0.2 \text{ Adc}, I_B = 0$)	$V_{CEO(\text{sus})}$	80	-	Vdc
Collector Cutoff Current ($V_{CE} = \text{Rated } V_{CEO}, I_B = 0$)	I_{CEO}	-	1.0	mAdc
Collector Cutoff Current ($V_{CE} = \text{Rated } V_{CEO}, V_{EB(\text{off})} = 1.5 \text{ Vdc}$) ($V_{CE} = \text{Rated } V_{CEO}, V_{EB(\text{off})} = 1.5 \text{ Vdc}, T_c = 150^\circ\text{C}$)	I_{CEX}	-	1.0 2.0	mAdc
Collector Cutoff Current ($V_{CB} = \text{Rated } V_{CB}, I_E = 0$)	I_{CBO}	-	1.0	mAdc
Emitter Cutoff Current ($V_{EB} = 5.0 \text{ Vdc}, I_C = 0$)	I_{EBO}	-	1.0	mAdc

ON CHARACTERISTICS (1)

DC Current Gain ($I_C = 2.5 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$) ($I_C = 5.0 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$)	h_{FE}	25 7.0	100	-
Collector-Emitter Saturation Voltage ($I_C = 2.5 \text{ Adc}, I_B = 250 \text{ mAdc}$) ($I_C = 5.0 \text{ Adc}, I_B = 1.0 \text{ Adc}$)	$V_{CE(\text{sat})}$	-	1.0 1.5	Vdc
Base-Emitter On Voltage ($I_C = 2.5 \text{ Adc}, V_{CE} = 2.0 \text{ Vdc}$)	$V_{BE(\text{on})}$	-	1.4	Vdc

SMALL-SIGNAL CHARACTERISTICS

Current-Gain-Bandwidth Product ($I_C = 1.0 \text{ Adc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ MHz}$)	f_T	4.0	-	MHz
Small-Signal Current Gain ($I_C = 500 \text{ mA}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$)	h_{fe}	20	-	-

(1) Pulse Test, PW = 300 μs , Duty Cycle = 2.0%

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