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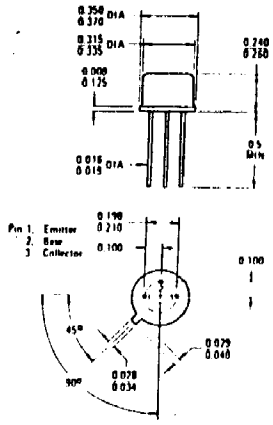
2N3137 (SILICON)

NPN silicon annular transistors for large signal VHF and UHF applications.

MAXIMUM RATINGS

Rating	Symbol	2N3137	Units
Collector-Base Voltage	V_{CB}	40	Vdc
Collector-Emitter Voltage	V_{CEO}	20	Vdc
Emitter-Base Voltage	V_{EB}	4.0	Vdc
Collector Current (Continuous)	I_C	150	mAdc
Power Dissipation @25°C Case Temperature @25°C Ambient Temperature	P_D	 2.0 0.8	Watts
Operating Junction Temperature Storage Temperature Range	T_J, T_{stg}	-65 to +200	°C
Thermal Resistance Junction to Case	θ_{JC}	87.5	°C/ Watt
Thermal Resistance Junction to Ambient	θ_{JA}	153	°C/ Watt



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ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Typical	Max	Unit
Collector-Base Breakdown Voltage I_C = 0.1mAdc, I_E = 0	V_{CBO}	40			Vdc
Collector-Emitter Open Base Sus. Voltage I_C = 15mAdc, I_B = 0	$V_{CEO(sus)}$	20			Vdc
Collector Cutoff Current V_{CB} = 20Vdc, I_E = 0, T_C = +150°C	I_{CBO}			50	μAdc
Collector Cutoff Current V_{CB} = 20Vdc, I_E = 0	I_{CBO}			.05	μAdc
Emitter-Base Breakdown Voltage I_E = 100μA, I_C = 0	V_{EBO}	4.0			Vdc
DC Current Gain V_{CE} = 5Vdc, I_C = 50mAdc	h_{FE}	20		120	
Collector-Emitter Saturation Voltage I_C = 50mAdc, I_E = 5mAdc	$V_{CE(sat)}$			0.3	Vdc
Small Signal Current Gain V_{CE} = 10Vdc, I_C = 50mAdc, f = 100 MHz	$\|h_{fe}\|$	5.0			
Common-base Output Capacitance V_{CB} = 10Vdc, I_C = 0, f = 100 kHz	C_{ob}			3.5	pF
Power Output	P_{out}	400	600		mWatts
Power Gain P_{in} = 100mw, f = 250 MHz	G_e	6.0	7.7		dB
Efficiency V_{CE} = 20Vdc	η	40	65		%