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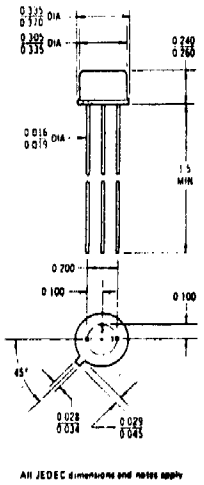
2N527 (GERMANIUM)

PNP germanium transistor for switching and amplifier applications in the audio-frequency range.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Base Voltage	V_{CB}	45	Vdc
Collector-Emitter Voltage	V_{CEO}	30	Vdc
Emitter-Base Voltage	V_{EB}	15	Vdc
Collector Current	I_C	500	mAdc
Storage and Operating Temperature	T_{stg}, T_J	-65 to +100	°C
Collector Dissipation @ 25°C Ambient	P_D	225	mW
Thermal Resistance Junction to Ambient	θ_{JA}	0.333	°C/mW
Thermal Resistance (infinite heat sink)	θ_{JC}	0.15	°C/mW

(TO-5)



All JEDEC dimensions and notes apply

STYLE 1
PIN 1 EMITTER
2 BASE
3 COLLECTOR

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

Characteristics	Symbol	Min	Max	Unit
Collector Cutoff Current (V_{CB} = 30 Vdc, I_E = 0)	I_{CBO}	-	10	μAdc
Emitter Cutoff Current (V_{EB} = 15 Vdc, I_C = 0)	I_{EBO}	-	10	μAdc
Collector-Emitter Breakdown Voltage (I_C = 0.6 mAdc, R_{BE} = 10K)	BV_{CER}	30	-	Vdc
Collector-Emitter Reach Through (Punch-Thru) Voltage (V_{EB} = 1 Vdc, VTVM Z ≥ 1 Megohm)	V_{RT}	30	-	Vdc
Static Forward-Current Transfer Ratio (V_{CE} = 1 Vdc, I_C = 20 mAdc)	h_{FE}	72	121	-
Small-Signal Short-Circuit Forward Current Transfer Ratio Frequency Cutoff (V_{CB} = 5 Vdc, I_E = 1 mAdc)	$f_{\alpha b}$	1.5	7.0	MHz
Output Capacitance (V_{CB} = 5 Vdc, I_E = 1 mAdc, f = 1 MHz)	C_{ob}	5.0	40	pF
Small-Signal Open Circuit Output Admittance (V_{CB} = 5 Vdc, I_E = 1 mAdc, f = 1 kHz)	h_{ob}	0.10	0.9	μmho
Small-Signal Open Circuit Reverse Transfer Voltage Ratio (V_{CB} = 5 Vdc, I_E = 1 mAdc, f = 1 kHz)	h_{rb}	1.0	14	$X10^{-4}$
Small-Signal Short Circuit Input Impedance (V_{CB} = 5 Vdc, I_E = 1 mAdc, f = 1 kHz)	h_{ib}	26	31	ohms
Collector-Emitter Saturation Voltage (I_B = 0.67 mAdc, I_C = 20 mAdc)	$V_{CE\ (sat)}$	-	130	mVdc
Base Input Voltage (V_{CE} = 1 Vdc, I_C = 20 mAdc)	V_{BE}	180	260	
Noise Figure (V_{CB} = 5 Vdc, I_E = 1 mAdc, f = 1 kHz, BW = 1 Hz	NF	-	15	dB
Small-Signal Short-Circuit Forward-Current Transfer Ratio (V_{CE} = 5 Vdc, I_E = 1 mAdc, f = 1 kHz)	h_{fe}	60	120	