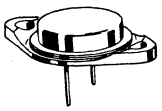
2N1021 (GERMANIUM)
2N1022



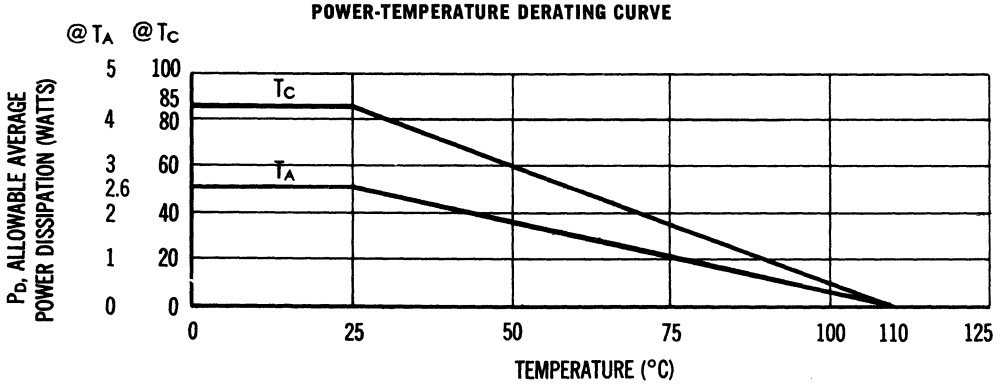
CASE 11
(TO-3)

PNP germanium power transistors for industrial and general purpose power amplifier and switching applications.

MAXIMUM RATINGS (T_C = 25°C unless otherwise noted)

Rating	Symbol	2N1021	2N1022	Unit
Collector-Base Voltage	V_{CB}	100	120	Volts
Collector-Emitter Voltage	V_{CEX}	100	120	Volts
Collector-Emitter Voltage	V_{CEO}	50		Volts
Emitter-Base Voltage	V_{EB}	30		Volts
Collector Current	I_C	5.0		Amp
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-65 to +110		°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	85 1.0		Watts W/°C

POWER-TEMPERATURE DERATING CURVE



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

Characteristic		Symbol	Min	Max	Unit
Collector-Base Cutoff Current		I_{CBO}			mAdc
(V_{CB} = 50 Vdc)	2N1021		—	0.5	
(V_{CB} = 60 Vdc)	2N1022		—	0.5	
(V_{CB} = 100 Vdc)	2N1021		—	2.0	
(V_{CB} = 120 Vdc)	2N1022		—	2.0	
(V_{CB} = 50 Vdc, T_C = +55°C)	2N1021		—	8.0	
(V_{CB} = 60 Vdc, T_C = +55°C)	2N1022		—	8.0	
Collector-Emitter Breakdown Voltage* (I_C = 200 mAdc)		BV_{CEO}*	50	—	Vdc
Emitter-Base Cutoff Current		I_{EBO}			mAdc
(V_{EB} = 10 Vdc)			—	0.5	
(V_{EB} = 30 Vdc)			—	2.0	
Base-Emitter Voltage (V_{CE} = -1.5 Vdc, I_C = 1.0 Adc)		V_{BE}	—	3.0	Vdc
Collector-Emitter Saturation Voltage (I_C = 5 Adc, I_B = 500 mAdc)		$V_{CE(sat)}$	—	0.5	Vdc
DC Current Gain		h_{FE}			—
(I_C = 1 Adc, V_{CE} = 1.5 Vdc)			40	—	
(I_C = 3 Adc, V_{CE} = 1.5 Vdc)			35	—	
(I_C = 5 Adc, V_{CE} = 1.5 Vdc)			30	90	
(I_C = 7 Adc, V_{CE} = 1.5 Vdc)			22	—	
Input Impedance (I_C = 1.0 Adc, V_{CE} = 1.5 Vdc)		h_{ie}	—	28	ohms
Current Gain-Bandwidth Product (I_C = 1.0 Adc, V_{CE} = 2 Vdc)		f_T	200	—	kHz

*Sweep Test: 1/2 sine wave, 60 Hz .