2N464 thru 2N467 (GERMANIUM)

CASE 31(1)
(TO-5)
All leads isolated

PNP germanium transistor for general purpose applications in the audio-frequency range.

MAXIMUM RATINGS

Rating	Symbol	2N464	2N465	2N466	2N467	Unit
Collector-Base Voltage	V_{CB}	45	45	35	35	Volts
Collector-Emitter Voltage	V_{CER}	40	30	20	15	Volts
Emitter-Base Voltage	V_{EB}	12				Volts
DC Collector Current	I_C	500				mA
Max. Junction & Storage Temperature	T_J and T_{stg}	100				°C
Collector Dissipation, Ambient	P_D	200				mW
Derate above 25°C		2.67				mW/°C
Thermal Resistance, Junction to Ambient	θ_{JA}	0.375				°C/mW

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

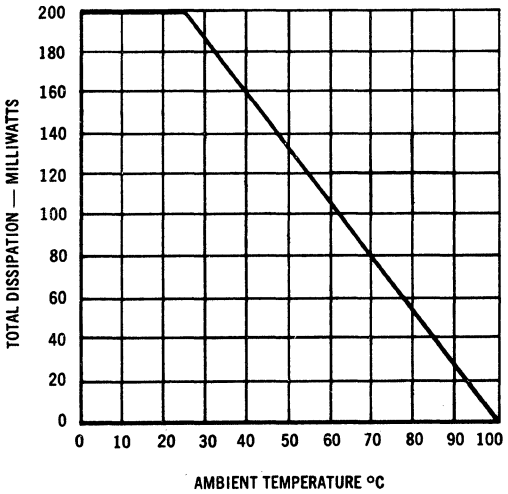
Characteristic		Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage (I_C = 0.6 mAdc, R_{BE} = 10 K ohms)	2N464	BV_{CER}	40	–	–	Vdc
	2N465		30	–	–	
	2N466		20	–	–	
	2N467		15	–	–	
Collector-Base Cutoff Current (V_{CB} = 20 Vdc)		I_{CBO}	–	6.0	15	μAdc
Small Signal Current Gain Cutoff Frequency (V_{CB} = 6 Vdc, I_E = 1 mAdc)	2N464	$f_{\alpha b}$	–	0.7	–	MHz
	2N465		–	0.8	–	
	2N466		–	1.0	–	
	2N467		–	1.2	–	
Small Signal Current Gain (V_{CE} = 6 Vdc, I_E = 1.0 mAdc, f = 1 kHz)	2N464	h_{fe}	14	26	–	–
	2N465		27	45	–	
	2N466		56	90	–	
	2N467		112	180	–	

2N464 thru 2N467 (continued)

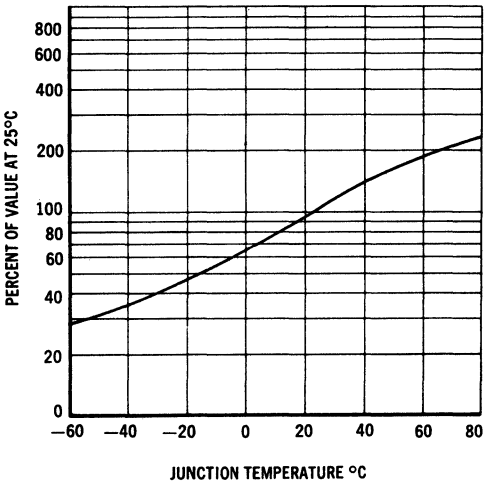
ELECTRICAL CHARACTERISTICS (continued)

Characteristic		Symbol	Min	Typ	Max	Unit
Small Signal Input Impedance (V_{CE} = 6 Vdc, I_E = 1.0 mAdc, f = 1 kHz)	2N464	h_{ie}	–	900	–	Ohms
	2N465		–	1400	–	
	2N466		–	3000	–	
	2N467		–	5500	–	
Small Signal Power Gain (V_{CE} = 6 Vdc, I_E = 1.0 mAdc, f = 1 kHz, matched)	2N464	G_e	–	40	–	dB
	2N465		–	42	–	
	2N466		–	44	–	
	2N467		–	45	–	
Noise Figure (V_{CE} = 2.5 Vdc, I_E = 0.5 mAdc, f = 1 kHz, R_S = 10 Kohms, Δf = 1 Hz		NF	–	–	22	dB

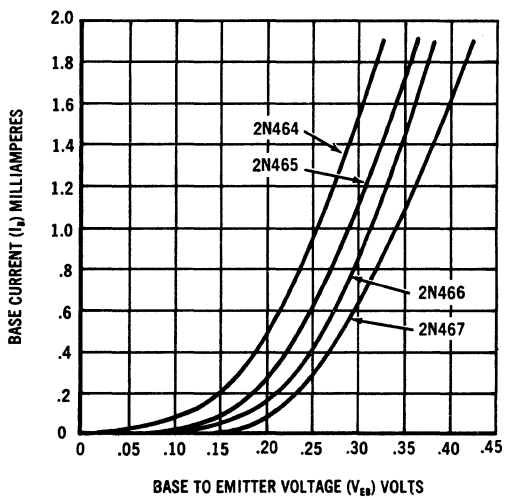
POWER-TEMPERATURE DERATING CURVE



SMALL SIGNAL CURRENT GAIN versus TEMPERATURE



Input Current versus Emitter-Drive Voltage



Small Signal Current Gain versus Collector Current

(common emitter 1 kHz)