MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	60	Vdc
Collector-Base Voltage	V_{CBO}	60	Vdc
Emitter-Base Voltage	V_{EBO}	6.0	Vdc
Collector Current — Continuous	I_C	50	mAdc
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	360 2.06	mW mW/°C
Total Device Dissipation @ T_C = 25°C Derate above 25°C	P_D	1.2 6.85	Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	− 65 to + 200	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	146	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$(1)	485	°C/W
Lead Temperature 1/16" from Case for 10 Seconds	T_L	300	°C

2N2484

JAN, JTX, JTXV AVAILABLE
CASE 22-03, STYLE 1
TO-18 (TO-206AA)

AMPLIFIER TRANSISTOR

NPN SILICON

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

Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage(2) (I_C = 10 mAdc, I_B = 0)	$V_{(BR)CEO}$	60	—	—	Vdc
Collector-Base Breakdown Voltage (I_C = 10 µAdc, I_E = 0)	$V_{(BR)CBO}$	60	—	—	Vdc
Emitter-Base Breakdown Voltage (I_E = 10 µAdc, I_C = 0)	$V_{(BR)EBO}$	6.0	—	—	Vdc
Collector Cutoff Current (V_{CB} = 45 Vdc, I_E = 0) (V_{CB} = 45 Vdc, I_E = 0, T_A = 150°C)	I_{CBO}	— —	— —	10 10	nAdc µAdc
Emitter Cutoff Current (V_{BE} = 5.0 Vdc, I_C = 0)	I_{EBO}	—	—	10	nAdc
ON CHARACTERISTICS					
DC Current Gain (I_C = 1.0 µAdc, V_{CE} = 5.0 Vdc) (I_C = 10 µAdc, V_{CE} = 5.0 Vdc) (I_C = 10 µAdc, V_{CE} = 5.0 Vdc, T_A = 55°C) (I_C = 100 µAdc, V_{CE} = 5.0 Vdc) (I_C = 500 µAdc, V_{CE} = 5.0 Vdc) (I_C = 1.0 mAdc, V_{CE} = 5.0 Vdc) (I_C = 10 mAdc, V_{CE} = 5.0 Vdc)(1)	h_{FE}	30 100 20 175 200 250 —	190 250 40 275 300 350 400	— 500 — — — — 800	—
Collector-Emitter Saturation Voltage (I_C = 1.0 mAdc, I_B = 0.1 mAdc)	$V_{CE(sat)}$	—	0.25	0.35	Vdc
Base-Emitter On Voltage (I_C = 0.1 mAdc, V_{CE} = 5.0 Vdc)	$V_{BE(on)}$	0.5	0.65	0.7	Vdc
SMALL-SIGNAL CHARACTERISTICS					
Current-Gain — Bandwidth Product (I_C = 0.05 mAdc, V_{CE} = 5.0 Vdc, f = 5.0 MHz) (I_C = 0.5 mAdc, V_{CE} = 5.0 Vdc, f = 30 MHz)	f_T	15 60	50 100	— 	MHz
Output Capacitance (V_{CB} = 5.0 Vdc, I_E = 0, f = 140 kHz)	C_{obo}	—	3.0	6.0	pF
Input Capacitance (V_{BE} = 0.5 Vdc, I_C = 0, f = 140 kHz)	C_{ibo}	—	4.0	6.0	pF
Input Impedance (I_C = 1.0 mAdc, V_{CE} = 5.0 Vdc, f = 1.0 kHz)	h_{ie}	3.5	—	24	kΩ
Voltage Feedback Ratio (I_C = 1.0 mAdc, V_{CE} = 5.0 Vdc, f = 1.0 kHz)	h_{re}	—	—	800	X 10^{-6}
Small-Signal Current Gain (I_C = 1.0 mAdc, V_{CE} = 5.0 Vdc, f = 1.0 kHz	h_{fe}	150	—	900	—
Output Admittance (I_C = 1.0 mAdc, V_{CE} = 5.0 Vdc, f = 1.0 kHz)	h_{oe}	—	—	40	µmhos
Noise Figure (I_C = 10 µAdc, V_{CE} = 5.0 Vdc, R_S = 10 kΩ, f = 100 Hz, BW = 20 Hz) (I_C = 10 µAdc, V_{CE} = 5.0 Vdc, R_S = 10 kΩ, f = 1.0 kHz, BW = 200 Hz) (I_C = 10 µAdc, V_{CE} = 5.0 Vdc, R_S = 10 kΩ, f = 10 kHz, BW = 2.0 kHz) (I_C = 10 µAdc, V_{CE} = 5.0 Vdc, R_S = 10 kΩ, f = 10 Hz to 15.7 kHz, BW = 15.7 kHz)	NF	 — — — —	 8.0 — — —	 10 3.0 2.0 3.0	dB

(1) $R_{\theta JA}$ is measured with the device soldered into a typical printed circuit board.
(2) Pulse Test: Pulse Width ≤ 300 µs, Duty Cycle ≤ 2.0%.