CV10814

CASE 22-03, STYLE 1
TO-18 (TO-206AA)

AMPLIFIER TRANSISTOR

PNP SILICON

4

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	40	Vdc
Collector-Base Voltage	V_{CBO}	40	Vdc
Emitter-Base Voltage	V_{EBO}	5	Vdc
Collector Current – Continuous	I_C	100	mAmp
Total Device Dissipation @ T_A = 25°C Derate above 25°C	P_D	300 2.0	mWatt mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−55 to +175	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	200	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	500	°C/W

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Sustaining Voltage (I_C = 2 mA, I_B = 0)	$V_{CEO(sus)}$	40		V
Collector Cutoff Current (Emitter Open) (V_{CB} = 30 V, I_E = 0) (V_{CB} = 30 V, I_E = 0, T_A = 100°C)	I_{CBO}		100 4	nA µA
Emitter Cutoff Current (Collector Open) (V_{EB} = 5 V, I_C = 0)	I_{EBO}		500	nA
ON CHARACTERISTICS				
Collector-Emitter Saturation Voltage (I_C = 10 mA, I_B = 1 mA)	$V_{CE(sat)}$		0.3	V
DC Current Gain (I_C = 10 µA, V_{CE} = 5 V) (I_C = 2 mA, V_{CE} = 5 V)	h_{FE}	40 125	400	
SMALL SIGNAL CHARACTERISTICS				
Current Gain Bandwidth Product (I_C = 10 mA, V_{CE} = 5 V, f = 100 MHz)	f_T	200		MHz
Small Signal Current Gain (I_C = 1 mA, V_{CE} = 10 V, f = 1 kHz)	h_{fe}	100	400	
Noise Figure (R_g = 2 KΩ, V_{CE} = 5 V, I_E = 200 µA, f = 30 Hz to 15 kHz	NF		2	dB
Output Capacitance (V_{CB} = 5 V, f = 1 MHz)	C_{obo}		8	pF