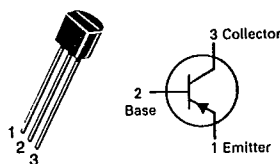


T-29-21

2N5227

CASE 29-04, STYLE 1
TO-92 (TO-226AA)



AMPLIFIER TRANSISTOR

PNP SILICON

Refer to 2N3905 for graphs.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	30	V _{dc}
Collector-Base Voltage	V _{CBO}	30	V _{dc}
Emitter-Base Voltage	V _{EBO}	3.0	V _{dc}
Collector Current — Continuous	I _C	50	mAdc
Total Device Dissipation @ T _A = 25°C Derate above 25°C	P _D	625 5.0	mW mW/°C
Total Device Dissipation @ T _C = 25°C Derate above 25°C	P _D	1.5 12.0	Watt mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-55 to +150	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R _{θJC}	83.3	°C/W
Thermal Resistance, Junction to Ambient	R _{θJA} (1)	200	°C/W

(1) R_{θJA} is measured with the device soldered into a typical printed circuit board.

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I _C = 1.0 mAdc, I _B = 0)	V _{(BR)CEO}	30	—	V _{dc}
Collector-Base Breakdown Voltage (I _C = 100 μAdc, I _E = 0)	V _{(BR)CBO}	30	—	V _{dc}
Emitter-Base Breakdown Voltage (I _E = 100 μAdc, I _C = 0)	V _{(BR)EBO}	3.0	—	V _{dc}
Collector Cutoff Current (V _{CB} = 10 Vdc, I _E = 0)	I _{CBO}	—	100	nAdc
Emitter Cutoff Current (V _{BE} = 2.0 Vdc, I _C = 0)	I _{EBO}	—	500	nAdc
ON CHARACTERISTICS				
DC Current Gain (I _C = 100 μAdc, V _{CE} = 10 Vdc) (I _C = 2.0 mAdc, V _{CE} = 10 Vdc)	h _{FE}	30 50	— 700	—
Collector-Emitter Saturation Voltage (I _C = 10 mAdc, I _B = 1.0 mAdc)	V _{CE(sat)}	—	0.4	V _{dc}
Base-Emitter Saturation Voltage (I _C = 10 mAdc, I _B = 1.0 mAdc)	V _{BE(sat)}	—	1.0	V _{dc}
SMALL-SIGNAL CHARACTERISTICS				
Current-Gain — Bandwidth Product (I _C = 10 mAdc, V _{CE} = 10 Vdc, f = 20 MHz)	f _T	100	—	MHz
Collector-Base Capacitance (V _{CB} = 10 Vdc, I _E = 0, f = 1.0 MHz)	C _{cb}	—	5.0	pF
Small-Signal Current Gain (I _C = 2.0 mAdc, V _{CE} = 10 Vdc, f = 1.0 kHz)	h _{fe}	50	1500	—