PRODUCT NAME : PN5138 PNP General P urpose Transistor (Pack of 5)

PRICE : Rs 20.00
SKU : RM2157

DESCRIPTION

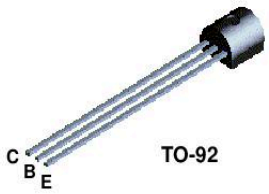
Features

- Collector-Emitter Volt (Vceo): 30V
- Collector-Base Volt (Vcbo): 30V
- Collector Current (Ic): 0.5A
- hfe: 50 @ 10mA
- Power Dissipation (Ptot): 625mW
- Type: PNP

FAIRCHILD SEMICONDUCTOR™

Discrete POWER & Signal Technologies

PN5138



TO-92

PNP General Purpose Amplifier

This device is designed for use as general purpose amplifiers and switches requiring collector currents to 300 mA. Sourced from Process 68. See PN200 for characteristics.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	30	V
V_{CBO}	Collector-Base Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current - Continuous	500	mA
T_J, T_{stg}	Operating and Storage Junction Temperature Range	-55 to +150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1) These ratings are based on a maximum junction temperature of 150 degrees C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		PN5138	
P_D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	°C/W

PNP General Purpose Amplifier
(continued)

Electrical Characteristics
TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage*	I_C = 10 mA, I_B = 0	30		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 100 µA, I_E = 0	30		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 100 µA, I_C = 0	5.0		V
I_{CBO}	Collector Cutoff Current	V_{CB} = 20 V, I_E = 0 V_{CB} = 20 V, I_E = 0, T_A = 65 °C		50 3.0	nA µA
ON CHARACTERISTICS*					
h_{FE}	DC Current Gain	V_{CE} = 10 V, I_C = 0.1 µA V_{CE} = 10 V, I_C = 1.0 mA V_{CE} = 10 V, I_C = 10 mA	50 50 50	800	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = 10 mA, I_B = 0.5 mA		0.3	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C = 10 mA, I_B = 0.5 mA		1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	V_{CE} = 10 V, I_C = 10 mA		1.0	V
SMALL SIGNAL CHARACTERISTICS					
C_{ob}	Output Capacitance	V_{CB} = 5.0 V, f = 1.0 MHz		7.0	pF
C_{ib}	Input Capacitance	V_{EB} = 0.5 V, f = 1.0 MHz		30	pF
h_{fe}	Small-Signal Current Gain	I_C = 1.0 mA, V_{CE} = 10 V, f = 1.0 kHz I_C = 0.5 mA, V_{CE} = 5.0 V, f = 20 MHz	40 1.5	1000	

*Pulse Test: Pulse Width ≤ 300 µs, Duty Cycle ≤ 2.0%