



PRODUCT NAME : 2N2218 NPN High Speed
d Switch Transistor

PRICE : Rs 49.00

SKU : RM1799



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DESCRIPTION

Features

- Collector-Emitter Volt (V_{ce0}): 30V
- Collector-Base Volt (V_{cbo}): 60V
- Collector Current (I_c): 0.8A
- h_{fe} : 40-120 @ 150mA
- Power Dissipation (P_{tot}): 800mW
- Current-Gain-Bandwidth (f_{total}): 250MHz
- Type: NPN




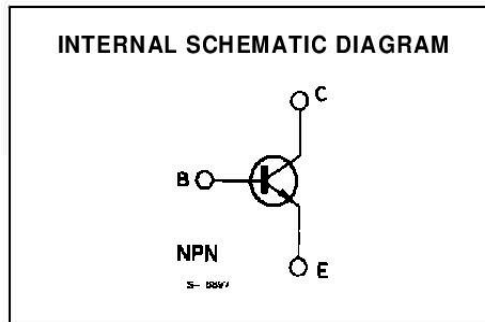
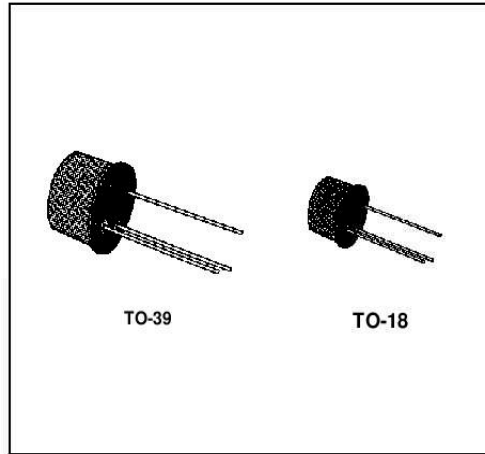
2N2218-2N2219
2N2221-2N2222

HIGH-SPEED SWITCHES

DESCRIPTION

The 2N2218, 2N2219, 2N2221 and 2N2222 are silicon planar epitaxial NPN transistors in Jedec TO-39 (for 2N2218 and 2N2219) and in Jedec TO-18 (for 2N2221 and 2N2222) metal cases. They are designed for high-speed switching applications at collector currents up to 500 mA, and feature useful current gain over a wide range of collector current, low leakage currents and low saturation voltages.

 2N2218/2N2219 approved to CECC 50002-100, 2N2221/2N2222 approved to CECC 50002-101 available on request.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-base Voltage (I _E = 0)	60	V
V _{CEO}	Collector-emitter Voltage (I _B = 0)	30	V
V _{EBO}	Emitter-base Voltage (I _C = 0)	5	V
I _C	Collector Current	0.8	A
P _{tot}	Total Power Dissipation at T _{amb} ≤ 25 °C for 2N2218 and 2N2219 for 2N2221 and 2N2222 at T _{case} ≤ 25 °C for 2N2218 and 2N2219 for 2N2221 and 2N2222	0.8	W
		0.5	W
		3	W
		1.8	W
T _{stg}	Storage Temperature	- 65 to 200	°C
T _j	Junction Temperature	175	°C

2N2218-2N2219-2N2221-2N2222

THERMAL DATA

			2N2218 2N2219	2N2221 2N2222
R _{th j-case}	Thermal Resistance Junction-case	Max	50 °C/W	83.3 °C/W
R _{th j-amb}	Thermal Resistance Junction-ambient	Max	187.5 °C/W	300 °C/W

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CB0}	Collector Cutoff Current (I _E = 0)	V _{CB} = 50 V V _{CB} = 50 V T _{amb} = 150 °C			10 10	nA μA
I _{EBO}	Emitter Cutoff Current (I _C = 0)	V _{EB} = 3 V			10	nA
V _{(BR)CBO}	Collector-base Breakdown Voltage (I _E = 0)	I _C = 10 μA	60			V
V _{(BR)CEO*}	Collector-emitter Breakdown Voltage (I _B = 0)	I _C = 10 mA	30			V
V _{(BR)EBO}	Emitter-base Breakdown Voltage (I _C = 0)	I _E = 10 μA	5			V
V _{CE(sat)*}	Collector-emitter Saturation Voltage	I _C = 150 mA I _B = 15 mA I _C = 500 mA I _B = 50 mA			0.4 1.6	V V
V _{BE(sat)*}	Base-emitter Saturation Voltage	I _C = 150 mA I _B = 15 mA I _C = 500 mA I _B = 50 mA			1.3 2.6	V V
h _{FE*}	DC Current Gain	for 2N2218 and 2N2221 I _C = 0.1 mA V _{CE} = 10 V I _C = 1 mA V _{CE} = 10 V I _C = 10 mA V _{CE} = 10 V I _C = 150 mA V _{CE} = 10 V I _C = 500 mA V _{CE} = 10 V I _C = 150 mA V _{CE} = 1 V for 2N2219 and 2N2222 I _C = 0.1 mA V _{CE} = 10 V I _C = 1 mA V _{CE} = 10 V I _C = 10 mA V _{CE} = 10 V I _C = 150 mA V _{CE} = 10 V I _C = 500 mA V _{CE} = 10 V I _C = 150 mA V _{CE} = 1 V	20 25 35 40 20 20		120	
f _T	Transition Frequency	I _C = 20 mA V _{CE} = 20 V f = 100 MHz	250			MHz
C _{CBO}	Collector-base Capacitance	I _E = 0 V _{CB} = 10 V f = 100 kHz			8	pF
R _{e(hie)}	Real Part of Input Impedance	I _C = 20 mA V _{CE} = 20 V f = 300 MHz			60	Ω

* Pulsed : pulse duration = 300 μs, duty cycle = 1 %.

