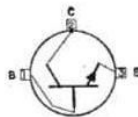


## POWER TRANSISTOR

# 2N3263

Silicon n-p-n type used in a wide variety of aerospace, military, and industrial applications requiring a high degree of reliability. The high current-handling capability of this type and its fast switching speed

make it especially suitable in circuits where optimum circuit efficiency is desired. This type is used in switching-control amplifiers, power gates, switching regulators, dc-dc converters, dc-ac inverters, dc-rf amplifiers, and power oscillators. Outline 45, Outlines Section.



### MAXIMUM RATINGS

Collector-to-Base Voltage	150 max	volts
Collector-to-Emitter Voltage (with emitter-to-base volts = -1.5)	150 max	volts
Collector-to-Emitter Sustaining Voltage	110 max	volts
With base-to-emitter resistance = 50 ohms or less	90 max	volts
With base open	7 max	volts
Emitter-to-Base Voltage	25 max	amperes
Collector Current	10 max	amperes
Base Current	See Dissipation Curve	
Transistor Dissipation	-65 to 200	°C
Temperature Range:		
Operating (junction) and Storage		

### CHARACTERISTICS

Emitter-to-Base Voltage (with emitter-to-base ampere = 0.02 and collector current = 0)	7 min	volts
Collector-to-Emitter Sustaining Voltage	90 min	volts
With collector ampere = 0.2 and base current = 0	110 min	volts
With external base-to-emitter resistance = 50 ohms or less, collector ampere = 0.2, and base current = 0	0.75 max	volts
Collector-to-Emitter Saturation Voltage (with pulsed collector ampere = 15* and base ampere = 1.2)	1.60 max	volts
Base-to-Emitter Voltage (with pulsed collector ampere = 15* and base ampere = 1.2)		
Collector-Cutoff Current:		
With case temperature = 25°C, collector-to-base volts = 80, and base current = 0	4 max	ma
With case temperature = 125°C, collector-to-base volts = 80, and base current = 0	4 max	ma
Emitter-Cutoff Current:		
With case temperature = 25°C, emitter-to-base volts = 5, and collector current = 0	5 max	ma
With case temperature = 125°C, emitter-to-base volts = 5, and collector current = 0	5 max	ma
Collector Current (with base reversed biased, collector-to-emitter volts = 150, and emitter-to-base volts = 1.5)	20 max	ma
Thermal Resistance (with junction temperature = 100°C, collector-to-emitter volts = 40, and collector ampere = 0.5)	1.5 max	°C/watt
Saturated Switching Turn-on Time (with dc collector supply volts = 30, turn-on and turn-off base ampere = 1.2, and collector ampere = 15)	0.5 max	μsec
Saturated Switching Storage Time (with dc collector supply volts = 30, turn-on and turn-off base ampere = 1.2, and collector ampere = 15)	1.5 max	μsec
Saturated Switching Fall Time (with dc collector supply voltage = 30, turn-on and turn-off base ampere = 1.2, and collector ampere = 15)	0.5 max	μsec
Second Breakdown Characteristics (safe-operating region):		
Current at second breakdown with collector-to-emitter volts = 75	350 min	ma
Energy at second breakdown with emitter-to-base volts = -6, collector ampere = 10, base-to-emitter resistance = 20 ohms, and inductance = 40 μh	2 min	mjoules

### In Common-Base Circuit

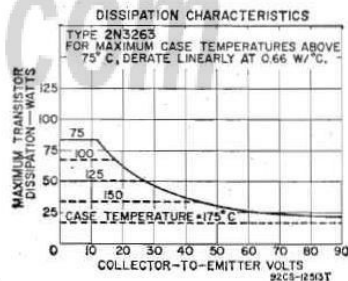
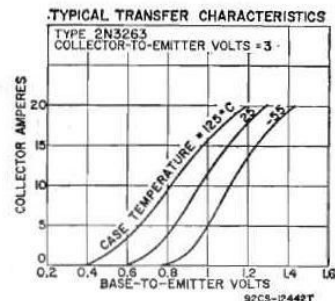
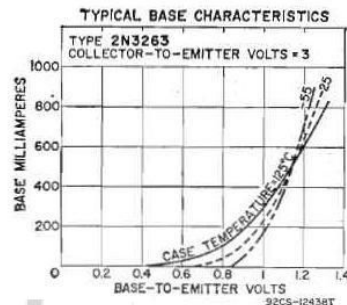
Collector-to-Base Feedback Capacitance (with collector-to-base volts = 10, base current = 0, and frequency = 1 Mc)	900 max	pf
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### In Common-Emitter Circuit

#### DC Forward Current-Transfer Ratio:

With collector-to-emitter volts = 3 and pulsed collector ampere = 5*	40 min
With collector-to-emitter volts = 3 and pulsed collector ampere = 15*	25 to 75
With collector-to-emitter volts = 4 and pulsed collector ampere = 20	20 min
Gain-Bandwidth Product (with collector-to-emitter volts = 10, collector ampere = 3, and frequency = 5 Mc)	20 min Mc

\*Pulse duration = 350 μsec or less; duty factor = 0.02 or less.



<http://alltransistors.com>

