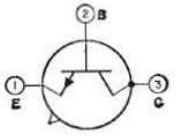
TRANSISTOR

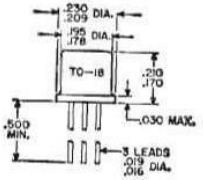
2N706
2N706A

Silicon n-p-n type used in high-speed switching applications in data-processing equipment. JEDEC No. TO-18 package; outline 12, Outlines Section.



MAXIMUM RATINGS

	2N706	2N706A	
Collector-to-Base Voltage (with emitter open)	25 max	25 max	volts
Collector-to-Emitter Voltage (with external base-to-emitter resistance = 10 ohms)	20 max	20 max	volts
Emitter-to-Base Voltage (with collector open)	3 max	5 max	volts
Collector Current	—	50 max	ma
Transistor Dissipation:			
At ambient temperatures up to 25°C	0.3 max	0.3 max	watt
At ambient temperatures above 25°C	See curve page 80		
At case temperatures up to 25°C	1 max	1 max	watt
At case temperature of 100°C	0.5 max	1 max	watt
Temperature Range:			
Operating (junction) and storage	−65 to 175		°C

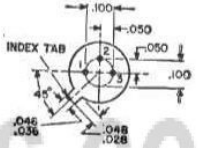


CHARACTERISTICS

Base-to-Emitter Saturation Voltage (with collector ma = 10 and base ma = 1)	0.9 max	0.9 max	volt
Collector-to-Emitter Saturation Voltage (with collector ma = 10 and base ma = 1)	0.6 max	0.6 max	volt
Collector-Cutoff Current (with collector-to-base volts = 15 and emitter current = 0)	0.5 max	0.5 max	μa

In Common-Base Circuit

Collector-to-Base Capacitance (with collector-to-base volts = 10 and emitter current = 0)	6 max	—	pf



In Common-Emitter Circuit

	2N706	2N706A
DC-Pulse Forward Current-Transfer Ratio (with dc collector-to-emitter volts = 1, collector ma = 10, pulse duration = 12 milliseconds or less, and duty factor = 0.02 or less)	20 min	20 min
Small-Signal Forward Current-Transfer Ratio:		
With collector-to-emitter volts = 15, collector ma = 10, and frequency = 100 Mc	2 min	—
With collector-to-emitter volts = 10, collector ma = 10, and frequency = 100 Mc	—	2 min