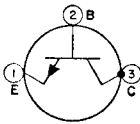


POWER TRANSISTOR

2N1701



Silicon n-p-n type used in a wide variety of switching and amplifier applications in industrial equipment. It is used in power-switching, dc-to-dc converter, inverter, chopper, and relay-control circuits; in oscillator, voltage-

and current-regulator circuits; and in dc and servo amplifier circuits. JEDEC No. TO-3 package; outline 8, Outlines Section.

MAXIMUM RATINGS

COLLECTOR-TO-BASE VOLTAGE (with emitter open).....	60 max	volts
COLLECTOR-TO-EMITTER VOLTAGE:		
With emitter-to-base volts = 1.5.....	60 max	volts
With base open.....	40 max	volts
EMITTER-TO-BASE VOLTAGE (with collector open).....	6 max	volts
COLLECTOR CURRENT.....	2.5 max	amperes
BASE CURRENT.....	1 max	ampere
TRANSISTOR DISSIPATION:		
At case temperatures up to 25°C.....	25 max	watts
At case temperatures above 25°C.....	See curve page 68	
TEMPERATURE RANGE:		
Operating (junction) and storage.....	-65 to 200	°C
LEAD TEMPERATURE (for 10 seconds maximum).....	235 max	°C

CHARACTERISTICS

Collector-to-Emitter Breakdown Voltage (with emitter-to-base volts = 1.5 and collector ma = 0.75).....	60 min	volts
Collector-to-Emitter Sustaining Voltage (with collector ma = 100 and base current = 0).....	40 min	volts
Base-to-Emitter Voltage (with collector-to-emitter volts = 4 and collector ma = 300).....	3 max	volts
Collector-Cutoff Current (with collector-to-base volts = 30 and emitter current = 0).....	100 max	µa
Emitter-Cutoff Current (with emitter-to-base volts = 6 and collector current = 0).....	50 max	µa
Thermal Resistance:		
Junction-to-case.....	7 max	°C/watt
Junction-to-ambient.....	100 max	°C/watt
Thermal Time Constant.....	10	msec

In Common-Base Circuit

Small-Signal Forward Current-Transfer-Ratio Cutoff Frequency (with collector-to-base volts = 28 and collector ma = 5).....	1	Mc
Collector-to-Base Capacitance (with collector-to-base volts = 40 and emitter current = 0).....	175	pf

In Common-Emitter Circuit

DC Forward Current-Transfer Ratio (with collector-to-emitter volts = 4 and collector ma = 300).....	20 to 80	
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