

TN6718A



NPN General Purpose Amplifier

This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.0A. Sourced from Process 39. See TN6717A for characteristics.

Absolute Maximum Ratings*

T_{A = 25°C} unless otherwise noted

•		Waltan	
Symbol	Parameter	Value	Units
V _{CEO}	Collector-Emitter Voltage	100	V
V _{CBO}	Collector-Base Voltage	100	٧
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current - Continuous	1.2	Α
T _{J, Tstg}	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°C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics ____ T_A = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units
		TN6718A	
P _D	Total Device Dissipation Derate above 25°C	1 8	W mW/°C
R ₀ JC	Thermal Resistance, Junction to Case	50	°C/W
R _{θJA}	Thermal Resistance, Junction to Ambient	125	°C/W

NPN General Purpose Amplifier

(continued)

Electrical Characteristics

 $T_{A=25^{\circ}\text{C}}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHA	RACTERISTICS				
BV _{CEO}	Collector-Emitter Breakdown Voltage	I _C = 10 mA	100		V
BV _{CBO}	Collector-Base Breakdown Voltage	I _C = 100 μA	100		V
BV _{EBO}	Emitter-Base Breakdown Voltage	I _E = 100 μA	5		V
I _{CBO}	Collector Cutoff Current	V _{CB} =80 V		100	nA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5 V		10	uA
ON CHAF	RACTERISTICS				
h _{FE}	DC Current Gain	I _C = 50 mA, V _{CE} = 1 V	80		-
		$I_C = 250 \text{ mA}, V_{CE} = 1 \text{ V}$	50	250	
		$I_C = 500 \text{ mA}, V_{CE} = 1 \text{ V}$	20		
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 250 mA, I _B = 10 mA		0.5	V
		$I_C = 250 \text{ mA}, I_B = 25 \text{ mA}$		0.35	
V _{BE(on)}	Base-Emitter On Voltage	I _C = 250 mA, V _{CE} = 1 V		1.2	V
SMALL SI	GNAL CHARACTERISTICS				
C _{cb}	Output Capacitance	V _{CB} = 10 V, I _E = 0, f = 1MHz		30	pF
h _{fe}	Small Signal Current Gain	I _C = 200 mA, V _{CE} = 5 V, f=20MHz	2.5	25	-

*Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 1.0%

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