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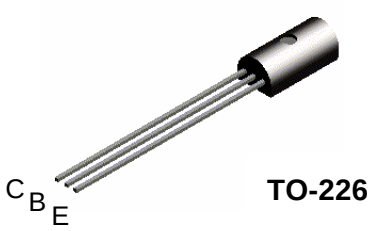
SEMICONDUCTOR TM

TN6727A



TO-226

PNP General Purpose Amplifier

This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1A. Sourced from Process 77. See TN6726A for characteristics.

Absolute Maximum Ratings*

$T_{A = 25°C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CES}	Collector-Emitter Voltage	40	V
V_{CBO}	Collector-Base Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current - Continuous	1.5	A
$T_{J, Tstg}$	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
		TN6727A	
P_D	Total Device Dissipation Derate above 25°C	1 8	W mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	50	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	125	°C/W

PNP General Purpose Amplifier
(continued)

Electrical Characteristics
$T_{A = 25°C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 10 mA	40		V
BV_{CBO}	Collector-Base Breakdown Voltage	I_C = 1 mA	50		V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E = 1 mA	5		V
I_{CBO}	Collector Cutoff Current	V_{CB} = 50 V		100	nA
I_{EBO}	Emitter Cutoff Current	V_{EB} = 5 V		100	nA
ON CHARACTERISTICS*					
h_{FE}	DC Current Gain	I_C = 10 mA, V_{CE} = 1 V I_C = 100 mA, V_{CE} = 1 V I_C = 1A, V_{CE} = 1 V	55 60 50	 250	-
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = 1 A, I_B = 100 mA		0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C = 1 A, V_{CE} = 1 V		1.2	V
SMALL SIGNAL CHARACTERISTICS					
C_{cb}	Output Capacitance	V_{CB} = 10 V, I_E = 0, f = 1MHz		30	pF
h_{fe}	Small Signal Current Gain	I_C = 50 mA,V_{CE} = 10 V, f=20MHz	2.5	25	-

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

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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Definition of Terms

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Rev. D