

61095

**GENERAL PURPOSE PNP TRANSISTOR
(2N2907A)**

Mii

**OPTOELECTRONIC PRODUCTS
DIVISION**

Features:

- TO-18 style package
- Rugged package – able to withstand high acceleration load
- Hermetically sealed
- Mil-S-19500 screening available

Applications:

- Analog switches
- Digital switches
- Signal Conditioning
- Amplifiers

DESCRIPTION

The 2N2907A is a hermetically sealed metal can general purpose switching transistor.

ABSOLUTE MAXIMUM RATINGS

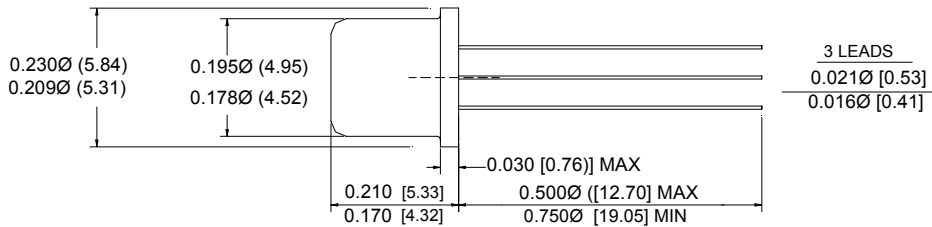
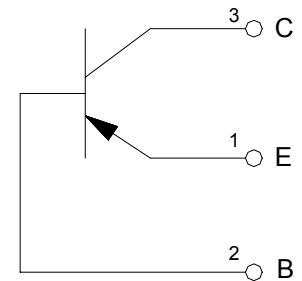
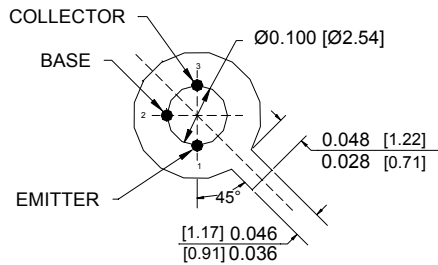
Collector-Base Voltage	60V
Collector-Emitter Voltage	60V
Emitter-Base Voltage	5V
Collector Current-Continuous	600mA
Operating Temperature	-65°C to +200°C
Storage Temperature	-65°C to +200°C
Maximum Junction Temperature	200°C
Power Dissipation @ T _a = 25°C	0.4W <u>1/</u>
Soldering Temperature (vapor phase reflow for 30 seconds)	215°C

Note:

1. Derate linearly @ 2.28 mw/°C for T_a > 25°C.

Package Dimensions

Schematic Diagram



DIMENSIONS ARE IN INCHES (MILLIMETERS)

OPTICAL/ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise specified.

PARAMETER	SYMBOL	MIN	MAX	UNITS	TEST CONDITIONS	NOTE
Collector-Base Breakdown Voltage	V _{(BR)CBO}	60		V	I _C = 10μA, I _E = 0	
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	60		V	I _C = 10mA, I _B = 0	
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	5.0		V	I _E = 10μA, I _C = 0	
Collector-Base Cutoff Current	I _{CBO}		10	nA	V _{CB} = 50V, I _E = 0	
			10	μA	V _{CB} = 50V, I _E = 0, T _A = 150°C	
Collector-Emitter Cutoff Current	I _{CES}		50	nA	V _{CE} = 30V	
Emitter-Base Cutoff Current	I _{EBO}		50	nA	V _{EB} = 3.5V, I _C = 0	
Forward-Current transfer Ratio	h _{fe1}	75		-	V _{CE} = 10V, I _C = 0.1mA	
		100	450	-	V _{CE} = 10V, I _C = 1.0mA	
		100		-	V _{CE} = 10V, I _C = 10mA	
		100	300	-	V _{CE} = 10V, I _C = 150mA	1
		50		-	V _{CE} = 10V, I _C = 500mA	1
		50		-	V _{CE} = 10V, I _C = 1.0mA @ -55°C	
Collector-Emitter Saturation Voltage	V _{CE(SAT)}		0.40	V	I _C = 150mA, I _B = 15mA	1
			1.60	V	I _C = 500 mA, I _B = 50mA	1
Base-Emitter Saturation Voltage	V _{BE(SAT)}		1.30	V	I _C = 150mA, I _B = 15mA	1
			2.60	V	I _C = 500mA, I _B = 50mA	1

SMALL-SIGNAL CHARACTERISTICS

Small Signal Forward Current Transfer Ratio	h _{fe}	100		-	V _{CE} = 10V, I _C = 1mA, f = 1kHz	
Small Signal Forward Current Transfer Ratio	h _{fe}	2.0		-	V _{CE} = 20V, I _C = 50mA, f = 100kHz	
Open Circuit Output Capacitance	C _{OBO}		8.0	pF	V _{CB} = 10V, 100kHz, ≤ f ≤ 1 MHz	
Input Capacitance (Output Open Capacitance)	C _{I BO}		30	pF	V _{EB} = 2.0V, 100kHz, ≤ f ≤ 1 MHz	
Turn-On Time	t _{on}		45	ns	V _{CC} = 30V, I _C = 150mA, I _{B1} = 15mA	
Turn-Off Time	t _{off}		300	ns	V _{CC} = 30V, I _C = 150mA, I _{B1} = I _{B2} = 15mA	

NOTES:

- Pulse width ≤ 300μs, duty cycle ≤ 2.0%.