

## Silicon PNP Power Transistors

## 2N3740 2N3741

**DESCRIPTION**

With TO-66 package

- Excellent safe area limits
- Low collector saturation voltage

**APPLICATIONS**

- Suitable for use in as drivers, switches and medium-power amplifier and applications

**PINNING (See Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

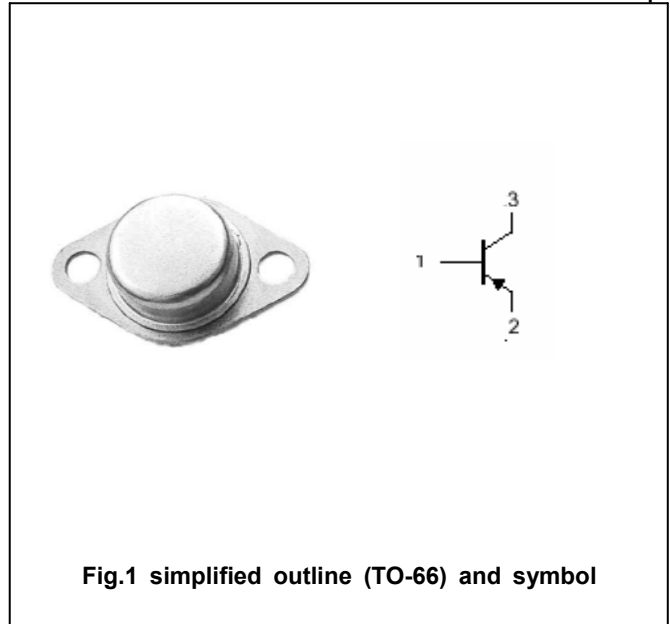


Fig.1 simplified outline (TO-66) and symbol

**ABSOLUTE MAXIMUM RATINGS(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	2N3740	-60	V
		2N3741	-80	
V <sub>CEO</sub>	Collector-emitter voltage	2N3740	-60	V
		2N3741	-80	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-7	V
I <sub>C</sub>	Collector current		-4	A
I <sub>CM</sub>	Collector current-Peak		-10	A
I <sub>B</sub>	Base current		-2	mA
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25°C	25	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~200	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>(th)jc</sub>	Thermal resistance from junction to case	7.0	°C/W

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## CHARACTERISTICS

T<sub>j</sub>=25 °C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	2N3740	I <sub>C</sub> =-100mA ; I <sub>B</sub> =0	-60			V
		2N3741		-80			
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =-1A ; I <sub>B</sub> =-125mA			-0.6	V
V <sub>BE(on)</sub>	Base -emitter on voltage		I <sub>C</sub> =-0.25A ; V <sub>CE</sub> =-1V			-1.0	V
I <sub>CEX</sub>	Collector cut-off current	2N3740	V <sub>CE</sub> =-60V; V <sub>BE(off)</sub> =-1.5V V <sub>CE</sub> =-40V; V <sub>BE(off)</sub> =-1.5V; T <sub>C</sub> =150 °C			-0.1 -1.0	mA
		2N3741	V <sub>CE</sub> =80V; V <sub>BE(off)</sub> =1.5V V <sub>CE</sub> =60V; V <sub>BE(off)</sub> =1.5V; T <sub>C</sub> =150 °C			-0.1 -1.0	
I <sub>CEO</sub>	Collector cut-off current	2N3740	V <sub>CE</sub> =-40V; I <sub>B</sub> =0			-1.0	mA
		2N3741	V <sub>CE</sub> =-60V; I <sub>B</sub> =0				
I <sub>CBO</sub>	Collector cut-off current	2N3740	V <sub>CB</sub> =-60V; I <sub>E</sub> =0			-0.1	mA
		2N3741	V <sub>CB</sub> =-80V; I <sub>E</sub> =0				
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =-7V; I <sub>C</sub> =0			-0.5	mA
h <sub>FE-1</sub>	DC current gain		I <sub>C</sub> =-0.1A ; V <sub>CE</sub> =-1V	40			
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =-0.25A ; V <sub>CE</sub> =-1V	30		100	
h <sub>FE-3</sub>	DC current gain		I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-1V	20			
h <sub>FE-4</sub>	DC current gain		I <sub>C</sub> =-1A ; V <sub>CE</sub> =-1V	10			
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =-0.1A ; V <sub>CE</sub> =-10V; f=1.0MHz	3.0			MHz
C <sub>OB</sub>	Output capacitance		I <sub>E</sub> =0 ; V <sub>CB</sub> =-10V; f=100kHz			100	pF

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PACKAGE OUTLINE



Fig.2 Outline dimensions