

## Silicon NPN Power Transistors

## 2N5758 2N5759 2N5760

## DESCRIPTION

- With TO-3 package
- Low collector saturation voltage
- Excellent safe operating area

## APPLICATIONS

- For use in high power audio amplifier applications and high voltage switching regulator circuits

## PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

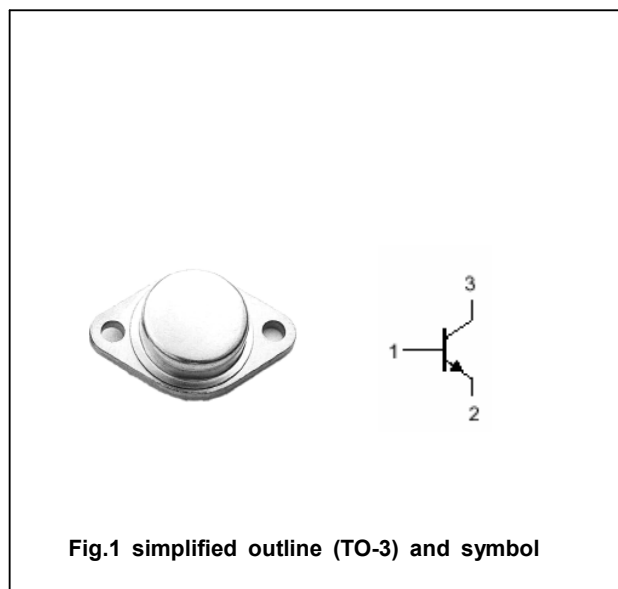


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings( $T_a = \square$ )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	2N5758	100	V
		2N5759	120	
		2N5760	140	
$V_{CEO}$	Collector-emitter voltage	2N5758	100	V
		2N5759	120	
		2N5760	140	
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		6	A
$I_{CM}$	Collector current-peak		10	A
$I_B$	Base current		4	A
$P_D$	Total Power Dissipation	$T_C = 25 \square$	150	W
$T_j$	Junction temperature		150	$\square$
$T_{stg}$	Storage temperature		-65~200	$\square$

## THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.17	$\square/W$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	2N5758	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	100			V
		2N5759		120			
		2N5760		140			
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =3A ; I <sub>B</sub> =0.3A			1.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage		I <sub>C</sub> =6A ; I <sub>B</sub> =1.2A			2.0	V
V <sub>BE</sub>	Base-emitter on voltage		I <sub>C</sub> =3A ; V <sub>CE</sub> =2V			1.5	V
I <sub>CEO</sub>	Collector cut-off current	2N5758	V <sub>CE</sub> =50V ; I <sub>B</sub> =0			1.0	mA
		2N5759	V <sub>CE</sub> =60V ; I <sub>B</sub> =0				
		2N5760	V <sub>CE</sub> =70V ; I <sub>B</sub> =0				
I <sub>CEX</sub>	Collector cut-off current		V <sub>CE</sub> =ratedV <sub>CB</sub> ; V <sub>BE(off)</sub> =1.5V T <sub>C</sub> =150°C			1.0 5.0	mA
I <sub>CBO</sub>	Collector cut-off current		V <sub>CE</sub> =ratedV <sub>CB</sub> ; I <sub>B</sub> =0			1.0	mA
I <sub>EBO</sub>	Emitter cut-off current		V <sub>EB</sub> =7V ; I <sub>C</sub> =0			1.0	mA
h <sub>FE-1</sub>	DC current gain	2N5758	I <sub>C</sub> =3A ; V <sub>CE</sub> =2V	25		100	
		2N5759		20	80		
		2N5760		15	60		
h <sub>FE-2</sub>	DC current gain		I <sub>C</sub> =6A ; V <sub>CE</sub> =2V	5.0			
C <sub>OB</sub>	Output capacitance		I <sub>E</sub> =0 ; V <sub>CB</sub> =10V ; f=0.1MHz			300	pF
f <sub>T</sub>	Transition frequency		I <sub>C</sub> =0.5A ; V <sub>CE</sub> =20V	1.0			MHz

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PACKAGE OUTLINE

