

Silicon NPN Power Transistors

2N6058 2N6059

DESCRIPTION

- With TO-3 package
- High current ;high dissipation
- DARLINGTON
- Complement to type 2N5883;2N5884

APPLICATIONS

- They are intended for use in power linear and low frequency switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

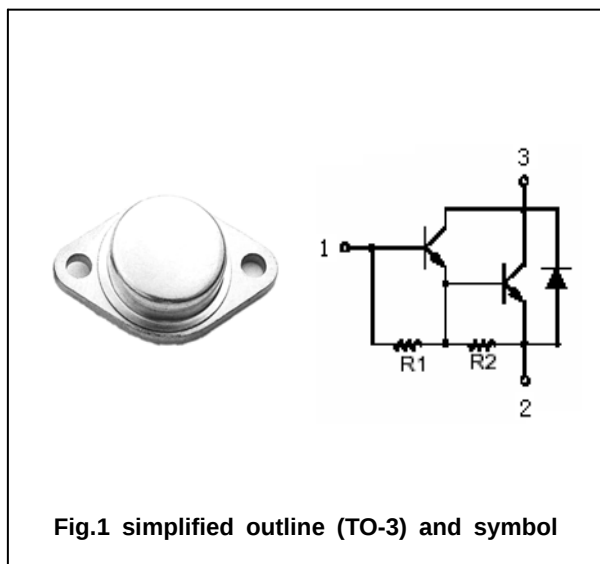


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a = ^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N6058	Open emitter	80	V
		2N6059		100	
V_{CEO}	Collector-emitter voltage	2N6058	Open base	80	V
		2N6059		100	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			12	A
I_{CM}	Collector current-peak			20	A
I_B	Base current			0.2	mA
P_D	Total Power Dissipation		$T_C = 25^\circ\text{C}$	150	W
T_j	Junction temperature			200	$^\circ\text{C}$
T_{stg}	Storage temperature			-65~200	$^\circ\text{C}$

THERMAL CHARACTERISTICS

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

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CHARACTERISTICS

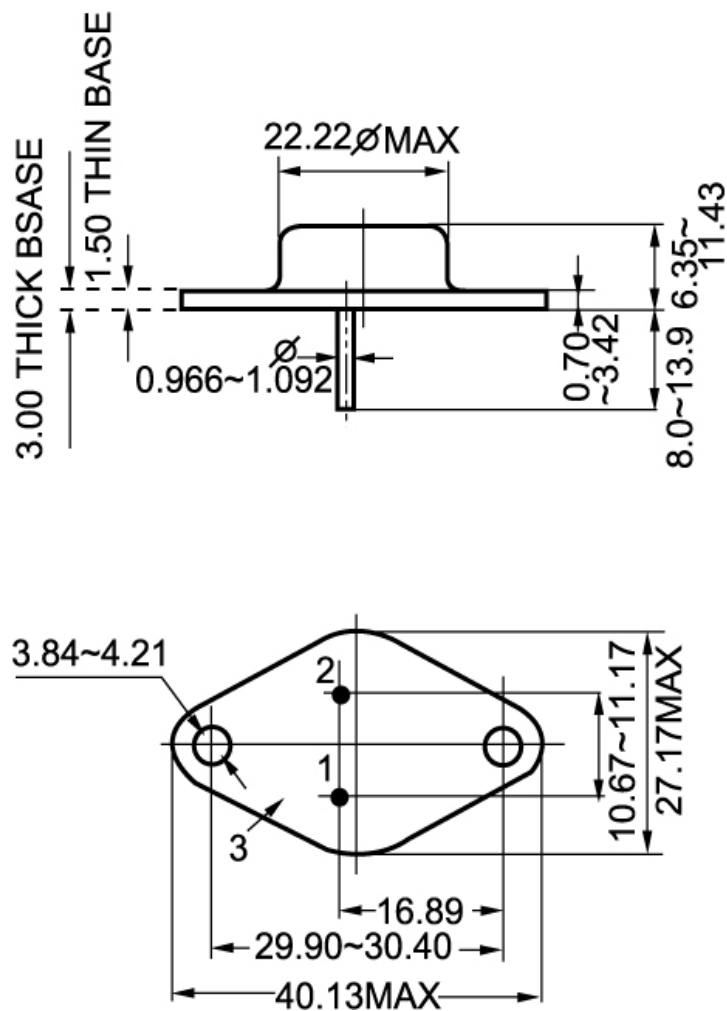
T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEQ(SUS)}	Collector-emitter sustaining voltage	2N6058	I _C =0.1A ; I _B =0	80			V
		2N6059		100			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =6A ; I _B =24mA			2.0	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =12A ; I _B =120mA			3.0	V
V _{BEsat}	Base-emitter saturation voltage		I _C =12A ; I _B =120mA			4.0	V
V _{BE}	Base-emitter on voltage		I _C =6A ; V _{CE} =3V			2.8	V
I _{CEO}	Collector cut-off current	2N6058	V _{CE} =40V; I _B =0			1.0	mA
		2N6059	V _{CE} =50V; I _B =0				
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			2.0	mA
h _{FE-1}	DC current gain		I _C =6A ; V _{CE} =3V	750			
h _{FE-2}	DC current gain		I _C =12A ; V _{CE} =3V	100			
f _T	Transistion frequency		I _C =5A ; V _{CE} =3V; f=1MHz	4			MHz

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PACKAGE OUTLINE

Fig.2 outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)