

Silicon NPN Power Transistors

2N6383 2N6384 2N6385

DESCRIPTION

- With TO-3 package
- Complement to type 2N6648/6649/6650
- DARLINGTON
- High DC current gain

APPLICATIONS

- Designed for low and medium frequency power application such as power switching audio amplifier ,hammer drivers and shunt and series regulators

PINNING

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

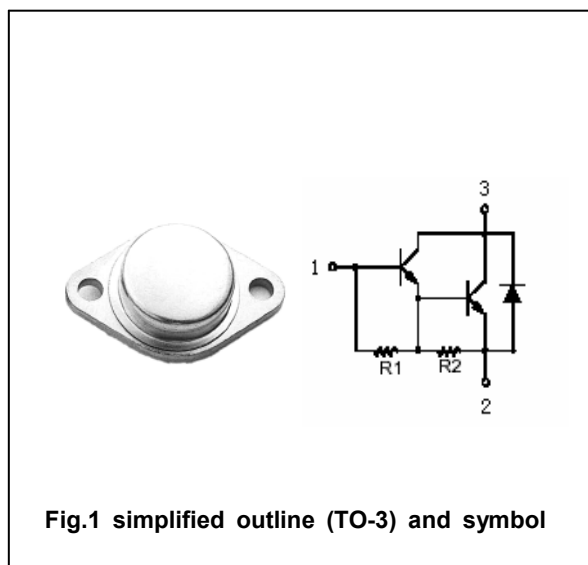


Fig.1 simplified outline (TO-3) and symbol

Absolute maximum ratings($T_a = \square$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N6383	Open emitter	40	V
		2N6384		60	
		2N6385		80	
V_{CEO}	Collector-emitter voltage	2N6383	Open base	40	V
		2N6384		60	
		2N6385		80	
V_{EBO}	Emitter-base voltage		Open collector	5	V
I_C	Collector current			10	A
I_{CM}	Collector current-peak			15	A
I_B	Base current			0.25	A
P_D	Total Power Dissipation		$T_C = 25\square$	100	W
T_j	Junction temperature			200	$\square$
T_{stg}	Storage temperature			-65~200	$\square$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.75	$\square/W$

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CHARACTERISTICS

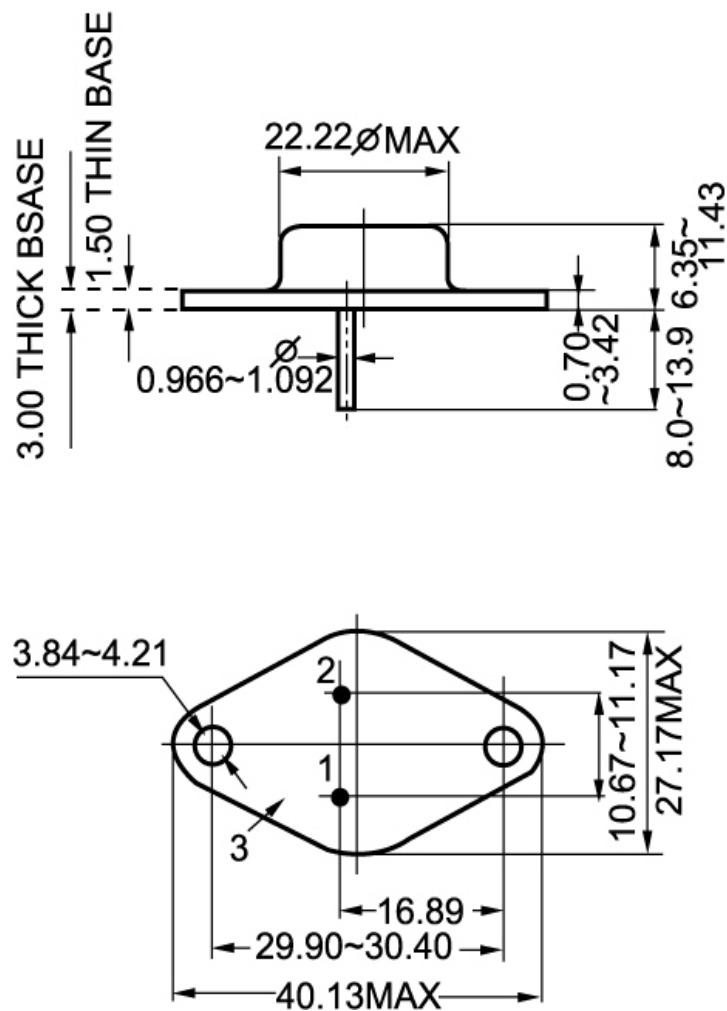
T_j=25℃ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	2N6383	I _C =0.2A ; I _B =0	40			V
		2N6384		60			
		2N6385		80			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =5A; I _B =10mA			2.0	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =10A ; I _B =100mA			3.0	V
V _{BE-1}	Base-emitter on voltage		I _C =5A ; V _{CE} =3V			2.8	V
V _{BE-2}	Base-emitter on voltage		I _C =10A ; V _{CE} =3V			4.5	V
I _{CEO}	Collector cut-off current	2N6383	V _{CE} =40V; I _B =0			1.0	mA
		2N6384	V _{CE} =60V; I _B =0				
		2N6385	V _{CE} =80V; I _B =0				
I _{CEX}	Collector cut-off current	2N6383	V _{CE} =40V; V _{BE} =-1.5V T _C =125℃			0.3 3.0	mA
		2N6384	V _{CE} =60V; V _{BE} =-1.5V T _C =125℃			0.3 3.0	
		2N6385	V _{CE} =80V; V _{BE} =-1.5V T _C =125℃			0.3 3.0	
I _{EBO}	Emitter cut-off current		V _{EB} =5V; I _C =0			10	mA
h _{FE-1}	DC current gain		I _C =5A ; V _{CE} =3V	1000		20000	
h _{FE-2}	DC current gain		I _C =10A ; V _{CE} =3V	100			
C _{OB}	Output capacitance		I _E =0; V _{CB} =10V; f=1MHz			200	pF

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PACKAGE OUTLINE

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