

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	Open emitter	100	V
		2N5759		120	
		2N5760		140	
V_{CEO}	Collector-emitter voltage	2N5758	Open base	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

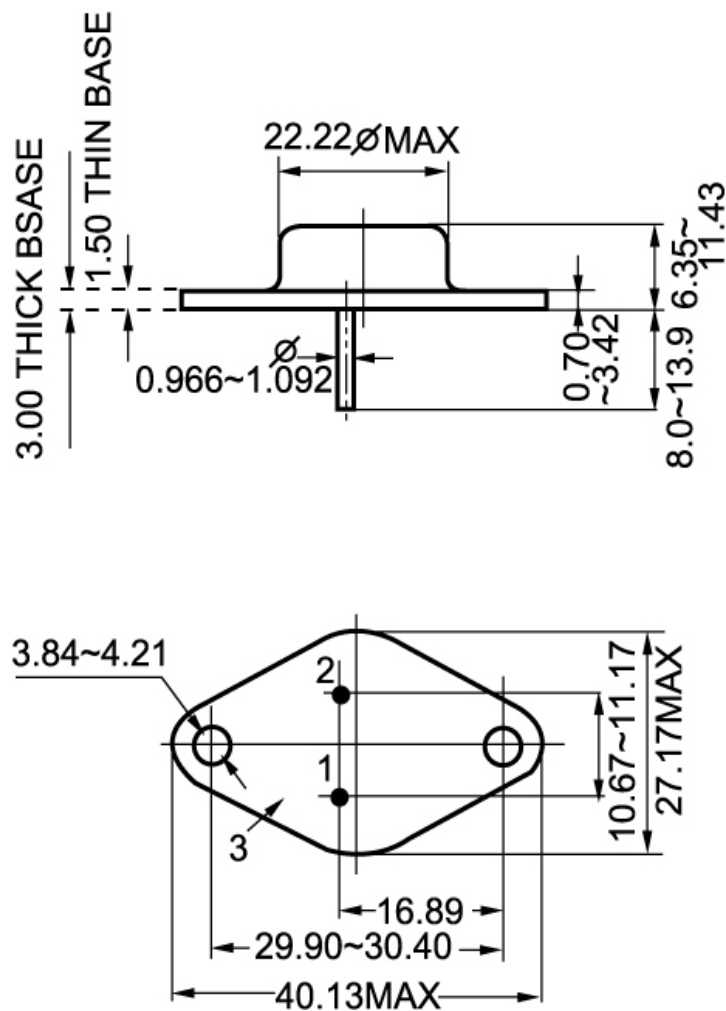
T_j=25°C unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE0(SUS)}	Collector-emitter sustaining voltage	2N5758	I _C =0.2A ; I _B =0	100			V
		2N5759		120			
		2N5760		140			
V _{CEsat-1}	Collector-emitter saturation voltage		I _C =3A ; I _B =0.3A			1.0	V
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =6A ; I _B =1.2A			2.0	V
V _{BE}	Base-emitter on voltage		I _C =3A ; V _{CE} =2V			1.5	V
I _{CEO}	Collector cut-off current	2N5758	V _{CE} =50V ; I _B =0			1.0	mA
		2N5759	V _{CE} =60V ; I _B =0				
		2N5760	V _{CE} =70V ; I _B =0				
I _{CEX}	Collector cut-off current		V _{CE} =ratedV _{CB} ; V _{BE(off)} =1.5V T _C =150°C			1.0 5.0	mA
I _{CBO}	Collector cut-off current		V _{CE} =ratedV _{CB} ; I _B =0			1.0	mA
I _{EBO}	Emitter cut-off current		V _{EB} =7V ; I _C =0			1.0	mA
h _{FE-1}	DC current gain	2N5758	I _C =3A ; V _{CE} =2V	25		100	
		2N5759		20		80	
		2N5760		15		60	
h _{FE-2}	DC current gain		I _C =6A ; V _{CE} =2V	5.0			
C _{OB}	Output capacitance		I _E =0 ; V _{CB} =10V ; f=0.1MHz			300	pF
f _T	Transition frequency		I _C =0.5A ; V _{CE} =20V	1.0			MHz

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PACKAGE OUTLINE

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