

SavantIC Semiconductor

Product Specification

Silicon NPN Power Transistors

2N5664 2N5665

DESCRIPTION

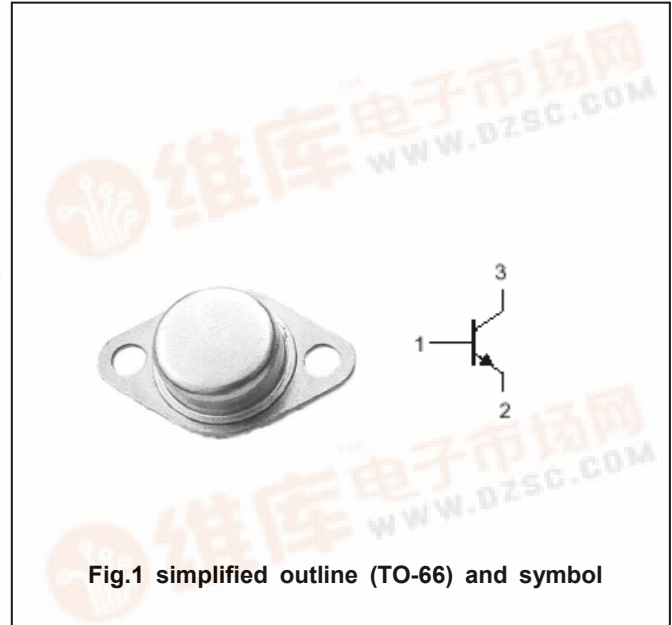
- With TO-66 package
- High breakdown voltage

APPLICATIONS

- High speed switching and linear amplifier
- High-voltage operational amplifiers
- Switching regulators ,converters
- Deflection stages and high fidelity amplifiers

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N5664	Open emitter	250	V
		2N5665		400	
V_{CEO}	Collector-emitter voltage	2N5664	Open base	200	V
		2N5665		300	
V_{EBO}	Emitter-base voltage		Open collector	6	V
I_C	Collector current			5.0	A
I_B	Base current			1.0	A
P_T	Total power dissipation		$T_C=25$	52.5	W
T_j	Junction temperature			200	
T_{stg}	Storage temperature			-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	5.0	/W

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	2N5664	I _C =10mA ; I _B =0	200			V
		2N5665		300			
V _{(BR)EBO}	Emitter-base breakdown voltage		I _E =10μA ; I _C =0	6			V
V _{CEsat-1}	Collector-emitter saturation voltage	2N5664	I _C =3A ; I _B =0.3A			0.4	V
		2N5665	I _C =3A ; I _B =0.6A				
V _{CEsat-2}	Collector-emitter saturation voltage		I _C =5A ; I _B =1A			1.0	V
V _{BEsat-1}	Base-emitter saturation voltage	2N5664	I _C =3A ; I _B =0.3A			1.2	V
		2N5665	I _C =3A ; I _B =0.6A				
V _{BEsat-2}	Base-emitter saturation voltage		I _C =5A ; I _B =1A			1.5	V
I _{CES}	Collector cut-off current	2N5664	V _{CE} =200V ; V _{BE(off)} =1.5V			0.2	mA
		2N5665	V _{CE} =300V ; V _{BE(off)} =1.5V				
I _{CBO}	Collector cut-off current	2N5664	V _{CB} =250V ; I _E =0			1.0	mA
		2N5665	V _{CB} =400V ; I _E =0				
h _{FE-1}	DC current gain	2N5664	I _C =0.5A ; V _{CE} =2V	40			
		2N5665		25			
h _{FE-2}	DC current gain	2N5664	I _C =1A ; V _{CE} =5V	40		120	
		2N5665		25		75	
h _{FE-3}	DC current gain	2N5664	I _C =3A ; V _{CE} =5V	15			
		2N5665		10			
h _{FE-4}	DC current gain		I _C =5A ; V _{CE} =5V	5			
C _{OB}	Output capacitance		I _E =0 ; V _{CB} =10V ; f=1MHz			120	pF
t _{on}	Turn-on time		V _{CC} =30V ; I _C =1A ; I _{B1} =-I _{B2} =30mA			0.25	μs
t _{off}	Turn-off time	2N5664	V _{CC} =30V ; I _C =1A ; I _{B1} =-I _{B2} =50mA			1.5	μs
		2N5665				2.0	

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PACKAGE OUTLINE

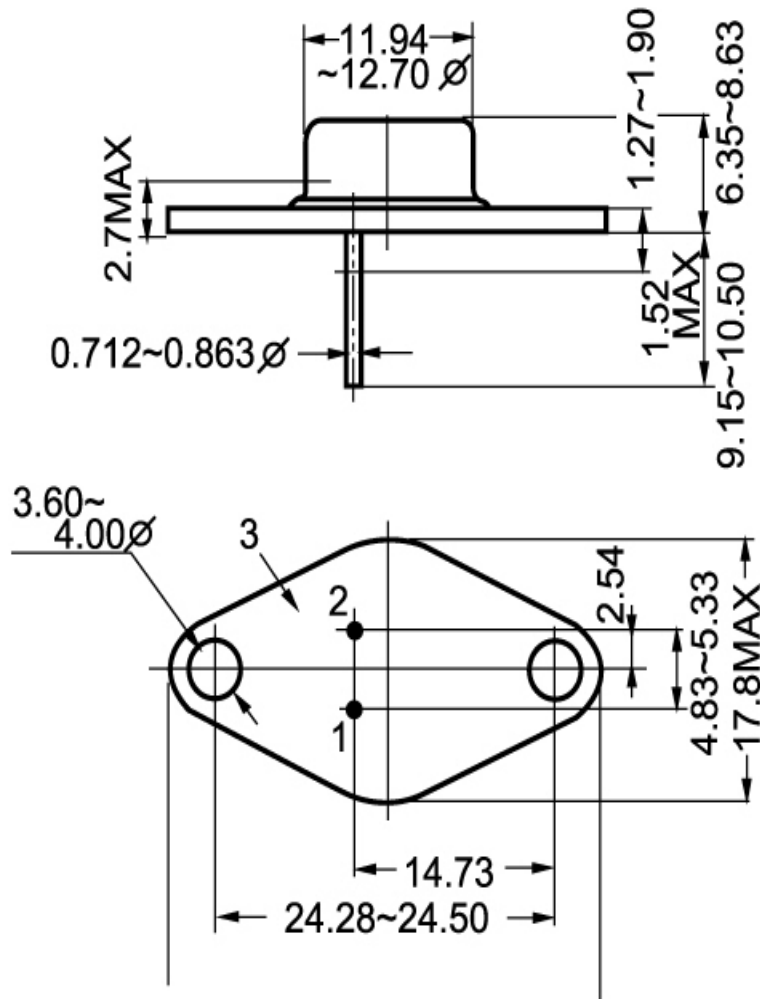


Fig.2 Outline dimensions