

Silicon NPN Power Transistors

2N5660 2N5661

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

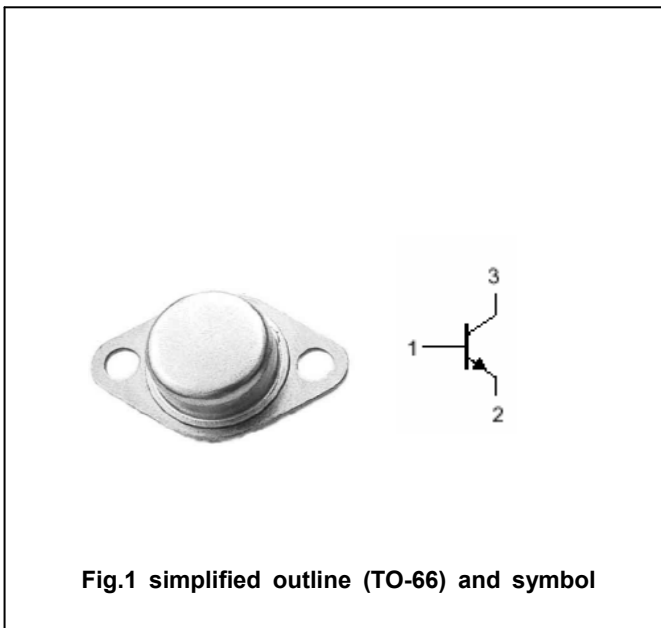


Fig.1 simplified outline (TO-66) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	2N5660	250	V
		2N5661	400	
V _{CEO}	Collector-emitter voltage	2N5660	200	V
		2N5661	300	
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current		2.0	A
I _B	Base current		0.5	A
P _T	Total power dissipation	T _C =100°C	20	W
		T _a =25°C	2	
T _j	Junction temperature		200	°C
T _{stg}	Storage temperature		-65~200	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction to case	5.0	°C/W

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{(BR)CEO}	Collector-emitter breakdown voltage	2N5660	I _C =10mA ; I _B =0	200			V
		2N5661		300			
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =10μA ; I _C =0	6			V	
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =1A; I _B =0.1A			0.4	V	
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =2A; I _B =0.4A			0.8	V	
V _{BEsat-1}	Base-emitter saturation voltage	I _C =1A ; I _B =0.1A			1.2	V	
V _{BEsat-2}	Base-emitter saturation voltage	I _C =2A; I _B =0.4A			1.5	V	
I _{CES}	Collector cut-off current	2N5660	V _{CE} =200V; V _{BE(off)} =1.5V		0.2	mA	
		2N5661	V _{CE} =300V; V _{BE(off)} =1.5V				
I _{CBO}	Collector cut-off current	2N5660	V _{CB} =250V; I _E =0		1.0	mA	
		2N5661	V _{CB} =400V; I _E =0				
h _{FE-1}	DC current gain	2N5660	I _C =50mA ; V _{CE} =2V		40		
		2N5661			25		
h _{FE-2}	DC current gain	2N5660	I _C =0.5A ; V _{CE} =5V		40	120	
		2N5661			25	75	
h _{FE-3}	DC current gain	I _C =1A ; V _{CE} =5V		15			
h _{FE-4}	DC current gain	I _C =2A ; V _{CE} =5V		5			
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V; f=1MHz			45	pF	
t _{on}	Turn-on time	2N5660	V _{CC} =100V; I _C =0.5A; I _{B1} =-I _{B2} =15mA		0.25	μs	
		2N5661	V _{CC} =100V; I _C =0.5A; I _{B1} =-I _{B2} =25mA				
t _{off}	Turn-off time	2N5660	V _{CC} =100V; I _C =0.5A; I _{B1} =-I _{B2} =15mA		0.85	μs	
		2N5661	V _{CC} =100V; I _C =0.5A; I _{B1} =-I _{B2} =25mA				

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PACKAGE OUTLINE



Fig.2 Outline dimensions