

Silicon NPN Power Transistors 2N5490 2N5492 2N5494 2N5496

DESCRIPTION

- With TO-220 package
- High power dissipation

APPLICATIONS

- For used in medium power and amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector; connected to mounting base
3	Emitter

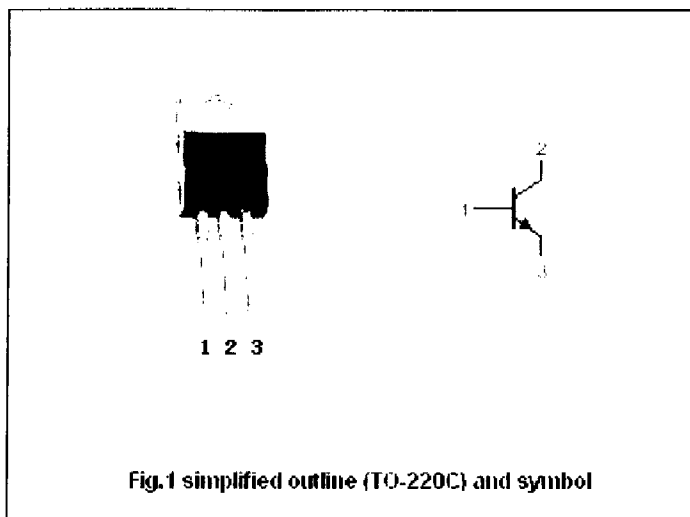


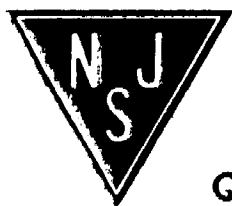
Fig.1 simplified outline (TO-220C) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	60	V
			75	
			90	
V_{CEO}	Collector-emitter voltage	Open base	40	V
			55	
			70	
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		7	A
I_B	Base current		3	A
P_D	Total power dissipation	$T_c=25^\circ\text{C}$	50	W
T_j	Junction temperature		150	—
T_{stg}	Storage temperature		-65~150	—

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R_{thj-c}	Thermal resistance from junction to case	2.5	/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 sustioning voltage	2N5490/5494	I _C =0.1A ; I _B =0	40			V
		2N5492		55			
		2N5496		70			
V _{CEsat}	Collector-emitter saturation voltage	2N5490	I _C =2.0A ; I _B =0.2A			1.0	V
		2N5492	I _C =2.5A ; I _B =0.25A				
		2N5494	I _C =3.0A ; I _B =0.3A				
		2N5496	I _C =3.5A ; I _B =0.35A				
V _{BE}	Base-emitter on voltage	2N5490	I _C =2.0A ; V _{CE} =4V			1.1	V
		2N5492	I _C =2.5A ; V _{CE} =4V			1.3	
		2N5494	I _C =3.0A ; V _{CE} =4V			1.5	
		2N5496	I _C =3.5A ; V _{CE} =4V			1.7	
I _{CEV}	Collector cut-off current	2N5492	V _{CE} =70V ; V _{BE} =1.5V			1.0	mA
		2N5490/5494	V _{CE} =55V ; V _{BE} =1.5V				
		2N5496	V _{CE} =85V ; V _{BE} =1.5V				
I _{CER}	Collector cut-off current		V _{CE} =Rated V _{CE0} ; R _{BE} =100Ω			0.5	mA
I _{EBO}	Emitter cut-off current		V _{EB} =5V ; I _C =0			1.0	mA
h _{FE}	DC current gain	2N5490	I _C =2.0A ; V _{CE} =4V	20		100	
		2N5492	I _C =2.5A ; V _{CE} =4V				
		2N5494	I _C =3.0A ; V _{CE} =4V				
		2N5496	I _C =3.5A ; V _{CE} =4V				
f _T	Transition frequency		I _C =0.5A ; V _{CE} =4V	0.8			MHz

PACKAGE OUTLINE

