

Silicon NPN Power Transistors

BUY69A BUY69B BUY69C

DESCRIPTION

- With TO-3 package
- High voltage capability

APPLICATIONS

- For horizontal deflection output stage of CTV receivers and high voltage, fast switching and industrial applications

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



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

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	BUY69A	1000	V
		BUY69B	800	
		BUY69C	500	
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BUY69A	400	V
		BUY69B	325	
		BUY69C	200	
V_{EBO}	Emitter-base voltage	Open collector	8	V
I_C	Collector current		10	A
I_{CM}	Collector current-peak		15	A
I_B	Base current		3.0	A
P_D	Total power dissipation	$T_C=25$	100	W
T_j	Junction temperature		200	
T_{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.75	/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	BUY69A	I _C =100mA ; I _B =0	400			V
		BUY69B		325			
		BUY69C		200			
V _{CBO}	Collector-base voltage	BUY69A	I _C =1mA; I _E =0	1000			V
		BUY69B		800			
		BUY69C		500			
V _{CEsat}	Collector-emitter saturation voltage		I _C =8A ; I _B =2.5A			3.3	V
V _{BEsat}	Base-emitter saturation voltage		I _C =8A ; I _B =2.5A			2.2	V
I _{CES}	Collector cut-off current		V _{CE} =rated V _{CE} ; V _{BE} =0			1.0	mA
I _{EBO}	Emitter cut-off current		V _{EB} =8V; I _C =0			1.0	mA
h _{FE}	DC current gain		I _C =2.5A ; V _{CE} =10V	15			
f _T	Transition frequency		I _C =0.5A ; V _{CE} =10V; f=1MHz	10			MHz

Switching times

t _r	Rise time	I _C =5A ; I _{B1} =-I _{B2} =1.0A; V _{CC} =250V			0.3	μs
t _s	Storage time				1.8	μs
t _f	Fall time				1.0	μs

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PACKAGE OUTLINE

