

HIGH VOLTAGE NPN SILICON TRANSISTOR

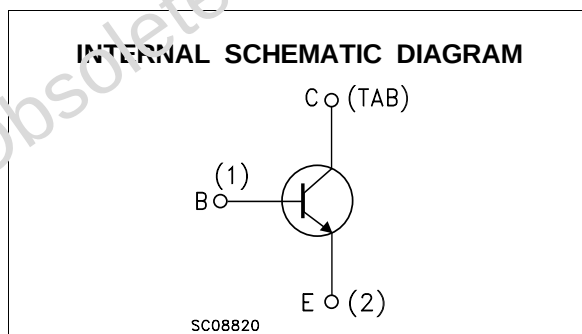
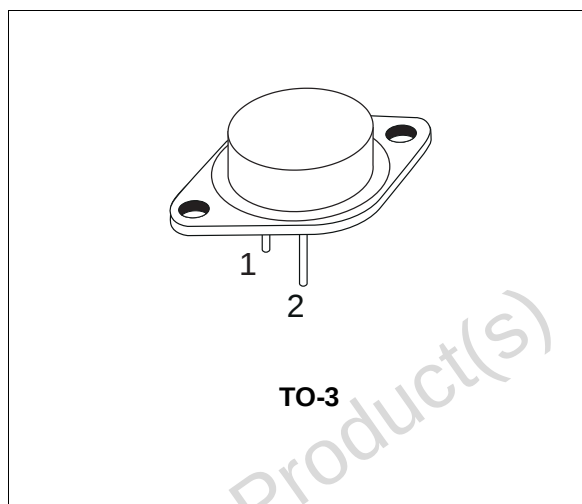
- STM PREFERRED SALESTYPE
- NPN TRANSISTOR
- HIGH VOLTAGE CAPABILITY
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED
- HIGH POWER TO-3 PACKAGE

APPLICATIONS:

- HORIZONTAL DEFLECTION FOR COLOUR TV
- SWITCHING REGULATORS

DESCRIPTION

The BUY69A is a silicon Multi-Epitaxial mesa NPN transistor in Jedec TO-3 metal case. It is intended for horizontal deflection output stage of CTV receivers and high voltage, fast switching and industrial applications.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CES}	Collector-Emitter Voltage ($V_{BE} = 0$)	1000	V
V_{CEO}	Collector-Emitter Voltage ($I_B = 0$)	400	V
V_{EBO}	Emitter-Base Voltage ($I_C = 0$)	8	V
I_C	Collector Current	10	A
I_{CM}	Collector Peak Current ($t_p \leq 10$ ms)	15	A
I_B	Base Current	3	A
P_{tot}	Total Dissipation at $T_c \leq 25$ °C	100	W
T_{stg}	Storage Temperature	-65 to 200	°C
T_j	Max. Operating Junction Temperature	200	°C

BUY69A

THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-case	Max	1.75	°C/W
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ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

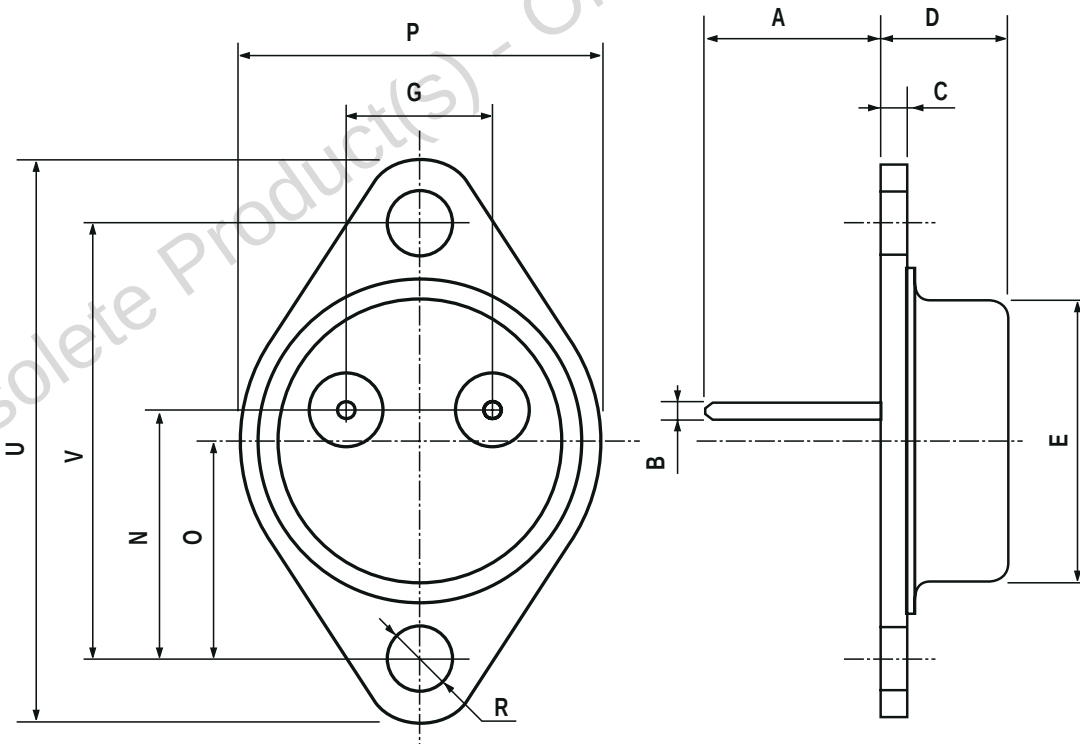
Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} = 1000 V				1	mA
I _{EBO}	Emitter Cut-off Current (I _C = 0)	V _{EB} = 8 V				1	mA
V _{CEO(sus)}	Collector-Emitter Sustaining Voltage (I _B = 0)	I _C = 100 mA		400			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = 8 A	I _B = 2.5 A			3.3	V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = 8 A	I _B = 2.5 A			2.2	V
h _{FE*}	DC Current Gain	I _C = 2.5 A	V _{CE} = 10 V	15			
f _T	Transition Frequency	I _C = 0.5 A	V _{CE} = 10 V		10		MHz
I _{s/b**}	Second Breakdown Collector Current	V _{CE} = 25 V		4			A
t _{on}	Turn on Time	I _C = 5 A I _{B1} = 1 A	V _{CE} = 250 V		0.2		μs
t _s t _s	Storage Time Fall Time	I _C = 5 A I _{B1} = - I _{B2} = 1 A	V _{CE} = 250 V			1.7 0.3	μs μs
t _r	Fall Time	I _C = 8 A I _{B1} = - I _{B2} = 2.5 A	V _{CE} = 40 V			1	μs

* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

** Pulsed: 1s, non repetitive pulse.

TO-3 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	11.00		13.10	0.433		0.516
B	0.97		1.15	0.038		0.045
C	1.50		1.65	0.059		0.065
D	8.32		8.92	0.327		0.351
E	19.00		20.00	0.748		0.787
G	10.70		11.10	0.421		0.437
N	16.50		17.20	0.649		0.677
P	25.00		26.00	0.984		1.023
R	4.00		4.09	0.157		0.161
U	38.50		39.30	1.515		1.547
V	30.00		30.30	1.187		1.193



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