

## HIGH VOLTAGE NPN SILICON TRANSISTOR

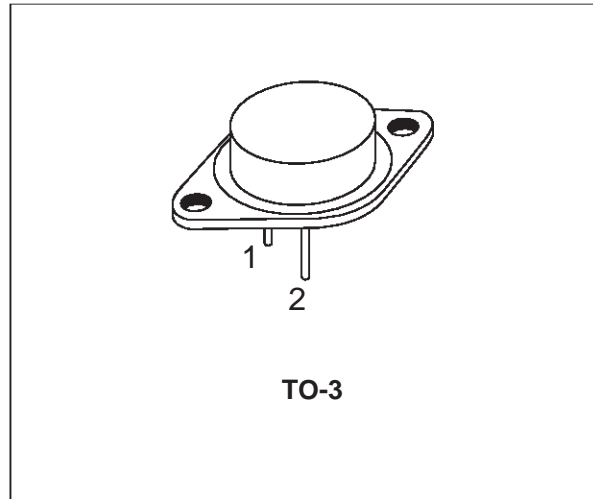
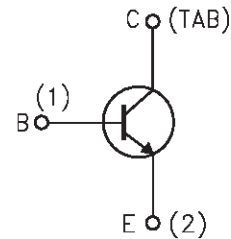
- STM PREFERRED SALESTYPE
- NPN TRANSISTOR
- HIGH VOLTAGE CAPABILITY
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED
- HIGH POWER TO-3 PACKAGE

**APPLICATIONS:**

- HORIZONTAL DEFLECTION FOR COLOUR TV
- SWITCHING REGULATORS

**DESCRIPTION**

The BUY69A is a silicon multiepitaxial 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.


**INTERNAL SCHEMATIC DIAGRAM**

**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 <sub>thj-case</sub>	Thermal Resistance Junction-case	Max	1.75	°C/W
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## ELECTRICAL CHARACTERISTICS (T<sub>case</sub> = 25 °C unless otherwise specified)

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

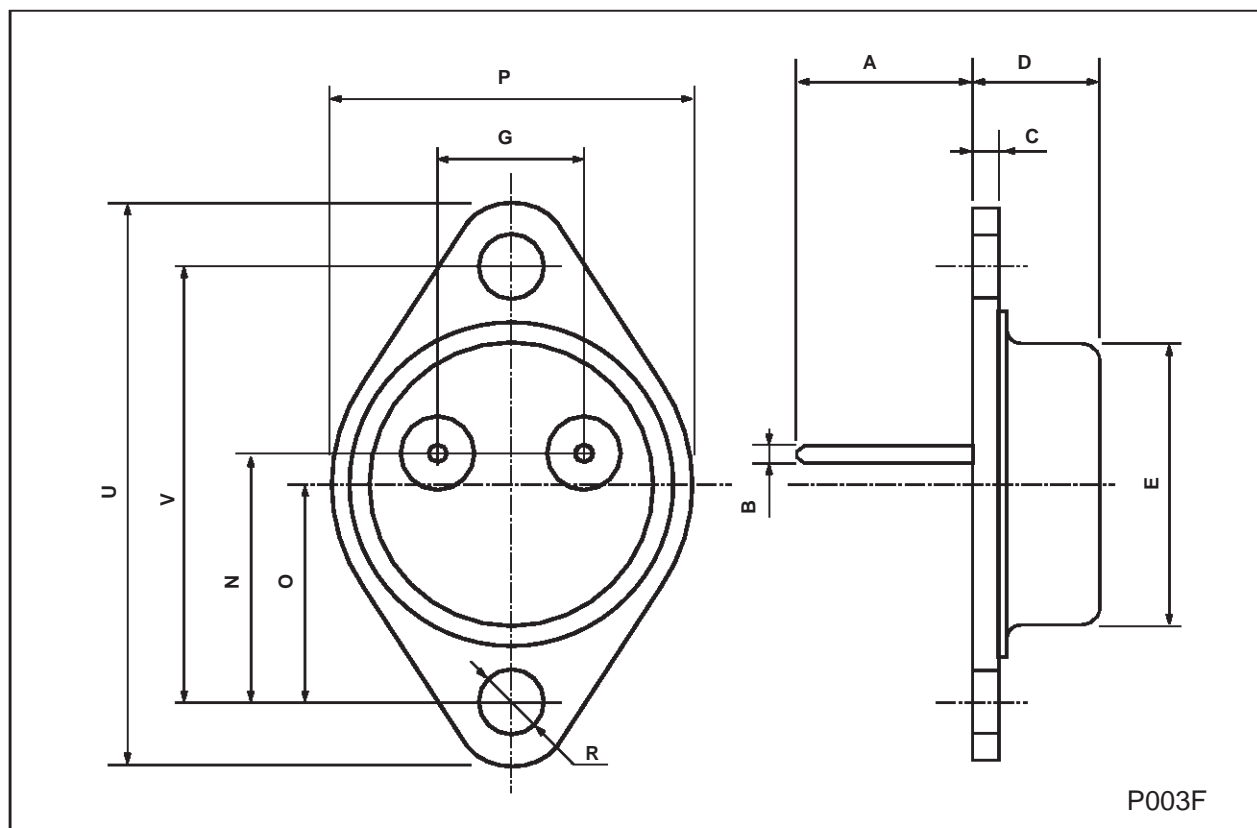
\* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

\*\* Pulsed: 1s, non repetitive pulse.

For characteristics curves see the BUW34/5/6 series.

## 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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