

**BUY69A**

HIGH VOLTAGE NPN SILICON TRANSISTOR

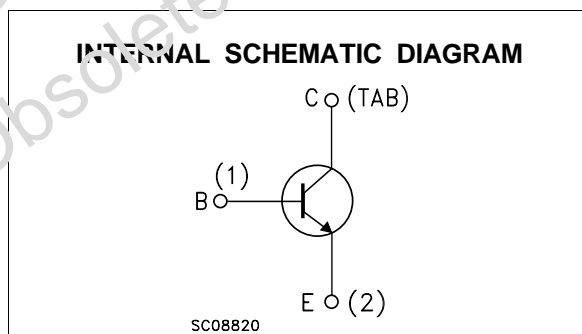
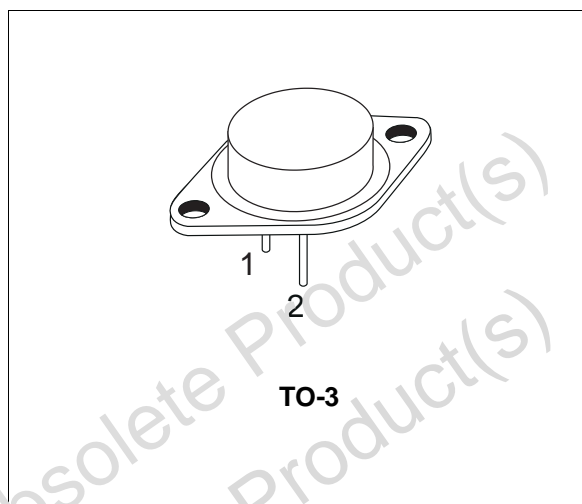
- STM PREFERRED SALESTYPE
- NPN TRANSISTOR
- HIGH VOLTAGE CAPABILITY
- HIGH CURRENT CAPABILITY
- FAST SWITCHING SPEED
- HIGH POWER TO-3 PACKAGE

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

THERMAL DATA

$R_{thj-case}$	Thermal Resistance Junction-case	Max	1.75	$^{\circ}\text{C/W}$
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ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}\text{C}$ unless otherwise specified)

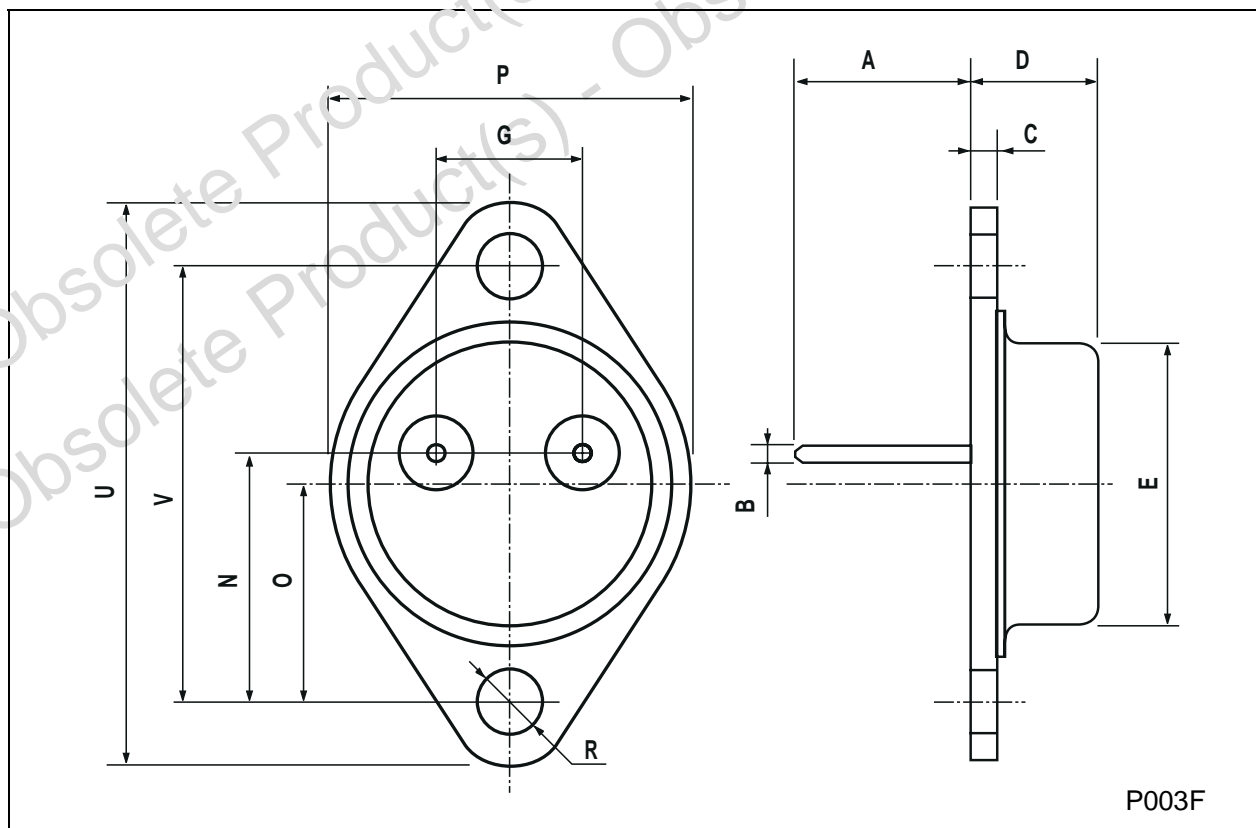
Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CES}	Collector Cut-off Current ($V_{BE} = 0$)	$V_{CE} = 1000\text{ V}$				1	mA
I_{EBO}	Emitter Cut-off Current ($I_C = 0$)	$V_{EB} = 8\text{ V}$				1	mA
$V_{CEO(sus)}$	Collector-Emitter Sustaining Voltage ($I_B = 0$)	$I_C = 100\text{ mA}$		400			V
$V_{CE(sat)*}$	Collector-Emitter Saturation Voltage	$I_C = 8\text{ A}$	$I_B = 2.5\text{ A}$			3.2	V
$V_{BE(sat)*}$	Base-Emitter Saturation Voltage	$I_C = 8\text{ A}$	$I_B = 2.5\text{ A}$			2.2	V
h_{FE*}	DC Current Gain	$I_C = 2.5\text{ A}$	$V_{CE} = 10\text{ V}$	15			
f_T	Transition Frequency	$I_C = 0.5\text{ A}$	$V_{CE} = 10\text{ V}$		10		MHz
$I_{s/b}^{**}$	Second Breakdown Collector Current	$V_{CE} = 25\text{ V}$		4			A
t_{on}	Turn on Time	$I_C = 5\text{ A}$ $I_{B1} = 1\text{ A}$	$V_{CE} = 250\text{ V}$		0.2		μs
t_s	Storage Time	$I_C = 5\text{ A}$	$V_{CE} = 250\text{ V}$			1.7	μs
t_s	Fall Time	$I_{B1} = -I_{B2} = 1\text{ A}$				0.3	μs
t_f	Fall Time	$I_C = 5\text{ A}$ $I_{B1} = -I_{B2} = 2.5\text{ A}$	$V_{CE} = 40\text{ V}$			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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