



## NPN BUY69A

### MULTIEPITAXIAL MESA NPN

The BUY69A is silicon multiepitaxial mesa NPN transistor in Jedec TO-3. They are intended for horizontal deflection output stage of CTV receivers and high voltage, fast switching and industrial applications. Compliance to RoHS.

#### ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
$V_{CEO}$	Collector-Emitter Voltage	$I_B = 0$	400	V
$V_{EBO}$	Emitter-Base Voltage	$I_C = 0$	8	V
$V_{CES}$	Collector-Emitter Voltage	$I_C = 0$	1000	V
$I_C$	Collector Current		10	A
$I_{CM}$	Collector Peak Current	$t_p = 10\text{ms}$	15	A
$I_B$	Base Current		3	A
$P_t$	Total Power Dissipation	@ $T_C = 25^\circ\text{C}$	100	W
$T_J$	Junction Temperature		200	$^\circ\text{C}$
$T_{Stg}$	Storage Temperature		-65 to +200	$^\circ\text{C}$

#### THERMAL CHARACTERISTICS

Symbol	Ratings	Value	Unit
$R_{thJC}$	Thermal Resistance, Junction to Case	1.75	$^\circ\text{C/W}$



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### ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage (*)	$I_C=100\text{ mA}$	400	-	-	V
$V_{CBO}$	Collector-Emitter	$I_C=1\text{ mA}$ $I_E=0$	1000	-	-	V
$I_{EBO}$	Emitter Cutoff Current	$V_{CE}=8\text{ V}$ $I_C=0$	-	-	1	mA
$I_{CES}$	Collector Cutoff Current	$V_{CE}=V_{CES}$ $V_{BE}=0$	-	-	1	mA
$h_{FE}$	DC Current Gain (*)	$I_C=2.5\text{ A}$ $V_{CE}=10\text{ V}$	15	-	-	-
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage (*)	$I_C=8\text{ A}$ $I_B=2.5\text{ A}$	-	-	3.3	V
$V_{BE(SAT)}$	Base-Emitter saturation Voltage (*)	$I_C=8\text{ A}$ $I_B=2.5\text{ A}$	-	-	2.2	
$f_T$	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	$I_C=5\text{ A}$ , $I_B=1\text{ A}$ $V_{CC}=250\text{ V}$	-	0.2	-	$\mu\text{s}$
$t_s$	Storage time	$I_C=5\text{ A}$ , $V_{CC}=250\text{ V}$ $I_{B1}=1\text{ A}$ , $-I_{B2}=1\text{ A}$	-	1.7	-	
$t_f$	File time	$I_C=5\text{ A}$ , $V_{CC}=-250\text{ V}$ $I_{B1}=1\text{ A}$ , $-I_{B2}=1\text{ A}$	-	0.3	-	
$t_f$	File time	$I_C=8\text{ A}$ , $V_{CC}=-40\text{ V}$ $I_{B1}=2.5\text{ A}$ , $-I_{B2}=2.5\text{ A}$			1	

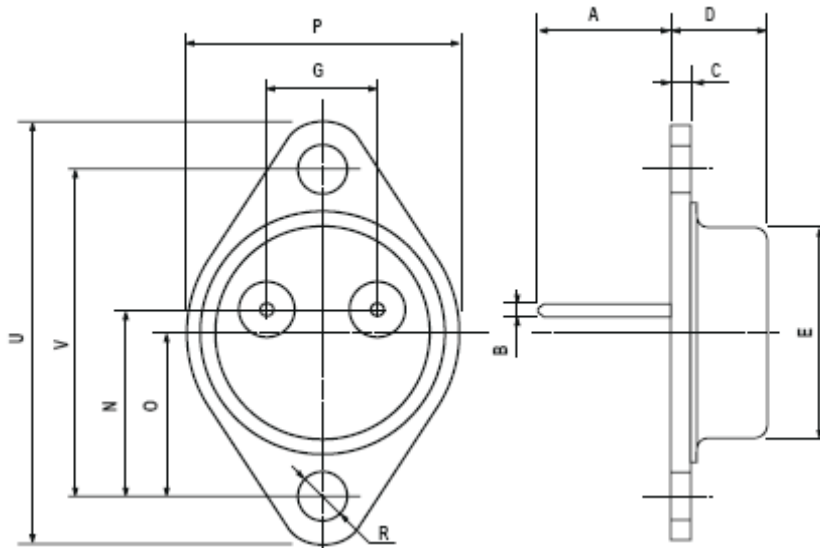
(\*) Pulse Duration = 300  $\mu\text{s}$ , Duty Cycle  $\leq$  1.5%

(\*\*) Pulsed :1s, non repetitive pulse

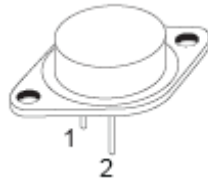
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### MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Base
Pin 2 :	Emitter
Case :	Collector



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