



## BU931Z

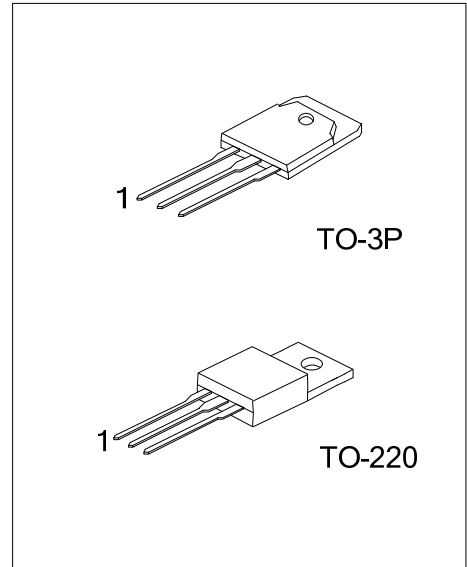
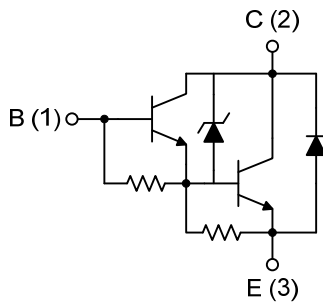
### NPN SILICON TRANSISTOR

### NPN POWER DARLINGTON

#### ■ FEATURES

- \* High Operating Junction Temperature
- \* High Voltage Ignition Coil Driver
- \* Very Rugged Bipolar Technology

#### ■ INTERNAL SCHEMATIC DIAGRAM



#### ■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BU931ZL-TA3-T	BU931ZG-TA3-T	TO-220	B	C	E	Tube
BU931ZL-T3P-T	BU931ZG-T3P-T	TO-3P	B	C	E	Tube

<p>BU931Z-TA3-T</p> <p>(1) Packing Type (2) Package Type (3) Lead Free</p>	<p>(1) T: Tube (2) TA3: TO-220, T3P: TO-3P (3) L: Lead Free, G: Halogen Free</p>
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■ ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Emitter Voltage		BV <sub>CEO</sub>	350	V
Emitter-Base Voltage		BV <sub>EBO</sub>	5	V
Collector Current (DC)		I <sub>C</sub>	10	A
Collector Peak Current		I <sub>CM</sub>	15	A
Base Current		I <sub>B</sub>	1	A
Base Peak Current		I <sub>BM</sub>	5	A
Total Dissipation (T <sub>C</sub> = 25 °C)	TO-220	P <sub>D</sub>	120	W
	TO-3P		125	
Junction Temperature		T <sub>J</sub>	+175	°C
Storage Temperature		T <sub>STG</sub>	-65 ~ +175	°C

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-off Current	I <sub>CEO</sub>	V <sub>CE</sub> = 250V			100	μA
Emitter Cut-off Current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V			20	mA
Clamping voltage	V <sub>CL</sub>	I <sub>C</sub> = 100mA	400			V
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)1</sub>	I <sub>C</sub> = 7 A, I <sub>B</sub> = 70 mA			1.6	V
	V <sub>CE(SAT)2</sub>	I <sub>C</sub> = 8 A, I <sub>B</sub> = 100 mA			1.8	V
Base-Emitter Saturation Voltage	V <sub>BE(SAT)1</sub>	I <sub>C</sub> = 7 A, I <sub>B</sub> = 70 mA			2.2	V
	V <sub>BE(SAT)2</sub>	I <sub>C</sub> = 8 A, I <sub>B</sub> = 100 mA			2.4	V
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 5 A	300			
Diode Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 8 A			2.5	V
Inductive Load Storage Time / Fall Time	t <sub>S</sub>	V <sub>CC</sub> = 12 V, V <sub>clamp</sub> = 300 V L = 7 mH, I <sub>C</sub> = 7 A, I <sub>B</sub> = 70 mA		15		μs
	t <sub>F</sub>	V <sub>BE</sub> = 0, R <sub>BE</sub> = 47Ω		0.5		μs

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