



## 2SD1071

Preliminary

**NPN EPITAXIAL SILICON TRANSISTOR**

### HIGH VOLTAGE POWER AMPLIFIER

#### DESCRIPTION

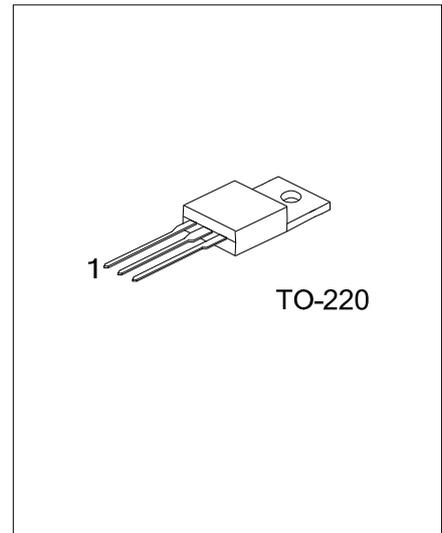
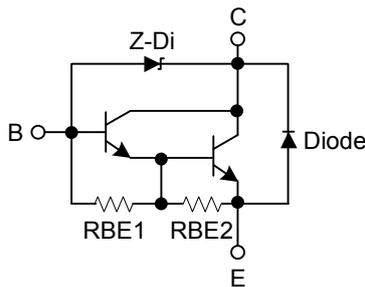
The UTC **2SD1071** is a high voltage power amplifier, it uses UTC advanced technology to provide the customers high DC current gain and low saturation voltage, etc.

The UTC **2SD1071** is suitable for general purpose power amplifier and Motor controls, etc.

#### FEATURES

- \* Low saturation voltage
- \* High DC current gain

#### EQUIVALENT CIRCUIT



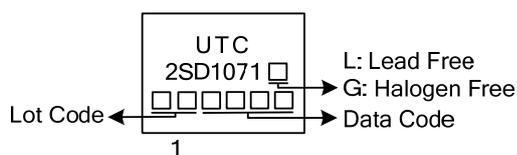
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD1071L-TA3-T	2SD1071G-TA3-T	TO-220	B	C	E	Tube

Note: Pin Assignment: E: Emitter C: Collector B: Base

<p>2SD1071L-TA3-T</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) T: Tube</li> <li>(2) TA3: TO-220</li> <li>(3) L: Lead Free, G: Halogen Free and Lead Free</li> </ul>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_C=25^\circ\text{C}$ )

PARAMETER	SYMBOL	RATINGS	UNIT
Collector to Base Voltage	$V_{CBO}$	300	V
Collector to Emitter Voltage	$V_{CEO}$	300	V
Emitter to Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	6	A
Base Current	$I_B$	2.5	A
Collector Dissipation	$P_C$	40	W
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40~+150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	$\theta_{JC}$	3	$^\circ\text{C/W}$

■ ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$ )

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector to Base Voltage	$V_{CBO}$	$I_{CBO}=1\text{mA}$	300			V
Collector to Emitter Voltage	$V_{CEO}$	$I_{CEO}=1\text{mA}$	300			V
Emitter to Base Voltage	$V_{EBO}$	$I_{EBO}=150\text{mA}$	6			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CBO}=250\text{V}$			0.1	mA
Emitter Cut-Off Current	$I_{EBO}$	$V_{EBO}=6\text{V}$			150	mA
DC Current Gain	$h_{FE}$	$V_{CE}=2\text{V}, I_C=4\text{A}$	500			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=4\text{A}, I_B=15\text{mA}$			1.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$				2.0	V

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