



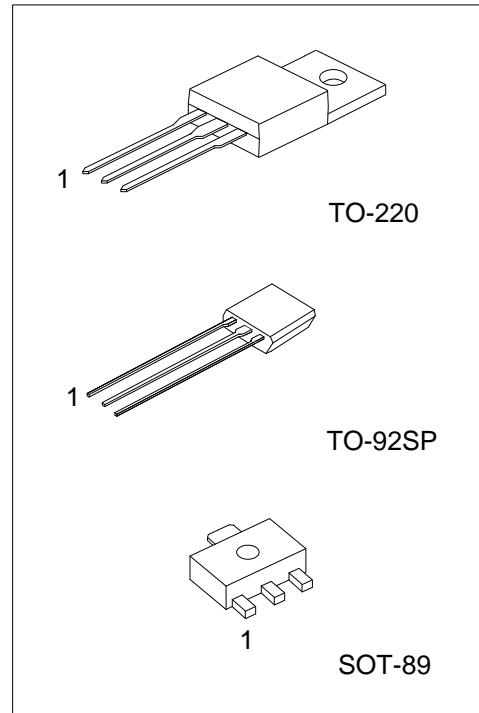
## 2SD2470

## NPN SILICON TRANSISTOR

### STROBO AND DC/DC CONVERTERS

#### ■ FEATURES

- \* Low saturation voltage  
 $V = 0.25V(\text{typ})$  at  $I_C/I_B = 3A/0.1A$
- \* Collector current of 5A is possible



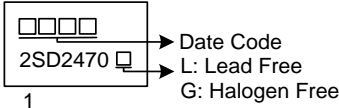
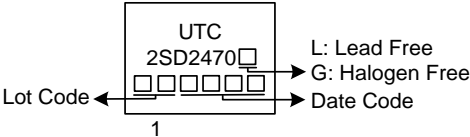
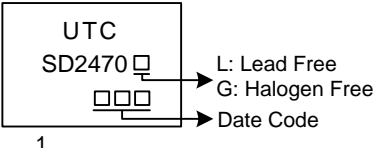
#### ■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SD2470L-x-AB3-R	2SD2470G-x-AB3-R	SOT-89	B	C	E	Tape Reel
2SD2470L-x-TA3-T	2SD2470G-x-TA3-T	TO-220	E	C	B	Tube
2SD2470L-x-T9S-B	2SD2470G-x-T9S-B	TO-92SP	E	C	B	Tape Box
2SD2470L-x-T9S-K	2SD2470G-x-T9S-K	TO-92SP	E	C	B	Bulk

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

<p>2SD2470G-x-AB3-R</p>	<p>(1) R: Tape Reel, T: Tube, B: Tape Box, K: Bulk  (2) AB3: SOT-89, TA3: TO-220, T9S: TO-92SP  (3) refer to Classification of hFE  (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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### MARKING INFORMATION

PACKAGE	MARKING
SOT-89	 <p>             Date Code              L: Lead Free              G: Halogen Free         </p>
TO-220	 <p>             L: Lead Free              G: Halogen Free              Date Code         </p>
TO-92SP	 <p>             L: Lead Free              G: Halogen Free              Date Code         </p>

■ **ABSOLUTE MAXIMUM RATING** ( $T_A=25^{\circ}\text{C}$ , unless otherwise noted)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	15	V
Collector-Emitter Voltage	$V_{CEO}$	10	V
Emitter-Base Voltage	$V_{EBO}$	10	V
Collector Current (DC)	$I_C$	5	A
Collector Current (PULSE) (Note 2)	$I_{CP}$	8	A
Collector Power Dissipation	SOT-89	0.5	W
	TO-220	2	W
	TO-92SP	0.4	W
Junction Temperature	$T_J$	+150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^{\circ}\text{C}$

Note: 1. 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.

2. Single Pulse =10ms

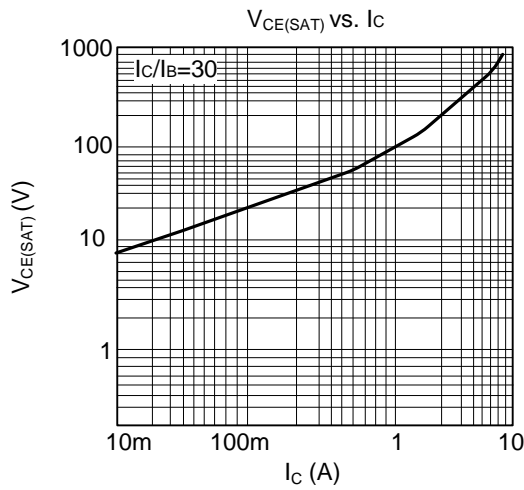
■ **ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Base Breakdown Voltage	$BV_{CBO}$	$I_C=50\mu\text{A}$	15			V
Collector Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=1\text{mA}$	10			V
Emitter Base Breakdown Voltage	$BV_{EBO}$	$I_E=50\mu\text{A}$	10			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=10\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=8\text{V}, I_C=0$			0.5	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=2\text{V}, I_C=2\text{A}$	270		820	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C/I_B=3\text{A}/0.1\text{A}$		0.25	0.5	V
Transition Frequency	$f_T$	$V_{CE}=6\text{V}, I_E=0.05\text{A}, f=100\text{MHz}$		170		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=10\text{V}, I_E=0\text{A}, f=1\text{MHz}$		30		pF

■ **CLASSIFICATION OF  $h_{FE}$**

RANK	S	E
RANGE	270~560	450~820

## ■ TYPICAL CHARACTERISTICS



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