



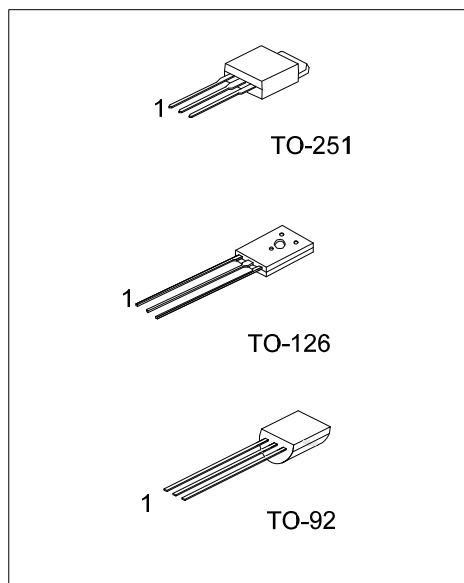
## UT2274

## NPN SILICON TRANSISTOR

### SWITCHING REGULATOR APPLICATIONS

#### FEATURES

- \* High breakdown voltage ( $V_{CBO} \geq 1400V$ ).
- \* Ultra high-speed switching.
- \* Wide SOA.



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UT2274L-TM3-T	UT2274G-TM3-T	TO-251	B	C	E	Tube
UT2274L-T60-K	UT2274G-T60-K	TO-126	B	C	E	Bulk
UT2274L-T92-B	UT2274G-T92-B	TO-92	B	C	E	Tape Box
UT2274L-T92-K	UT2274G-T92-K	TO-92	B	C	E	Bulk
UT2274L-T92-A-B	UT2274G-T92-A-B	TO-92	E	C	B	Tape Box
UT2274L-T92-A-K	UT2274G-T92-A-K	TO-92	E	C	B	Bulk

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

<p>UT2274L-T92-x-B</p> <p>(1) Packing Type (2) Pin Assignment (3) Package Type (4) Green Package</p>	<p>(1) B: Tape Box, K: Bulk, T: Tube (2) refer to Pin Assignment (3) T92: TO-92, TM3: TO-251, T60: TO-126 (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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### MARKING

PACKAGE	MARKING
TO-251	<p>                     UTC                      UT2274 □                      □□□□ □                      Lot Code ←      → Data Code                      1                      L: Lead Free                      G: Halogen Free                 </p>
TO-126	<p>                     UTC □□□□                      → Data Code                      UT2274 □                      → L: Lead Free                      → G: Halogen Free                      1                 </p>
TO-92	<p>                     UTC                      UT2274 □                      □ □□ □                      Pin Code ←      → Data Code                      1                      L: Lead Free                      G: Halogen Free                 </p>

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■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		$V_{CBO}$	1400	V
Collector-Emitter Voltage		$V_{CEO}$	720	V
Emitter-Base Voltage		$V_{EBO}$	5	V
Collector Current	DC	$I_C$	1	A
	Pulse (Note 2)	$I_{CP}$	2	A
Collector Dissipation	TO-251	$P_C$	1	W
	TO-92		625	mW
	TO-126		875	
Junction Temperature		$T_J$	150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

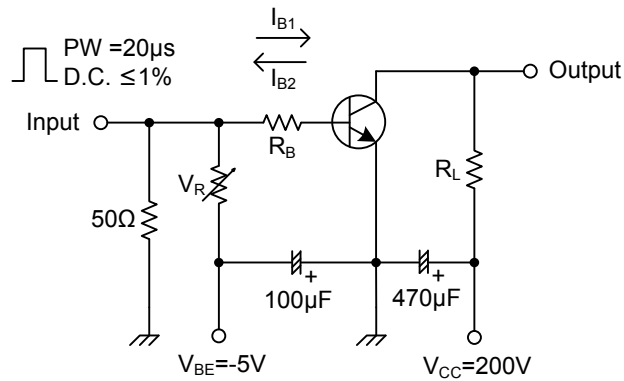
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2.  $P_W \leq 300\mu\text{s}$ , duty cycle  $\leq 10\%$

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C=1\text{ mA}, I_E=0\text{A}$	1400			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=5\text{ mA}, R_{BE}=\infty$	720			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=1\text{ mA}, I_C=0\text{A}$	5			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=800\text{ V}, I_E=0\text{A}$			10	$\mu\text{A}$
Collector Cut-off Current	$I_{CES}$	$V_{CE}=1400\text{ V}, R_{BE}=0\Omega$			1	mA
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0\text{A}$			1	mA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=0.25\text{ A}, I_B=0.05\text{ A}$			1.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=0.5\text{ A}, I_B=0.1\text{ A}$			1.5	V
DC Current Gain	$h_{FE1}$	$V_{CE}=5\text{V}, I_C=0.1\text{ A}$	15		35	
	$h_{FE2}$	$V_{CE}=5\text{V}, I_C=0.5\text{ A}$	4			
Storage Time	$t_{STG}$	$V_{CC}=200\text{V}, R_L=400\Omega$		1.5	3.0	$\mu\text{s}$
Fall Time	$t_F$	$I_C=0.5\text{A}, I_{B1}=0.1\text{A}, I_{B2}=-0.25\text{A}$ ,		0.25	0.4	$\mu\text{s}$

### ■ SWITCHING TIME TEST CIRCUIT



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