



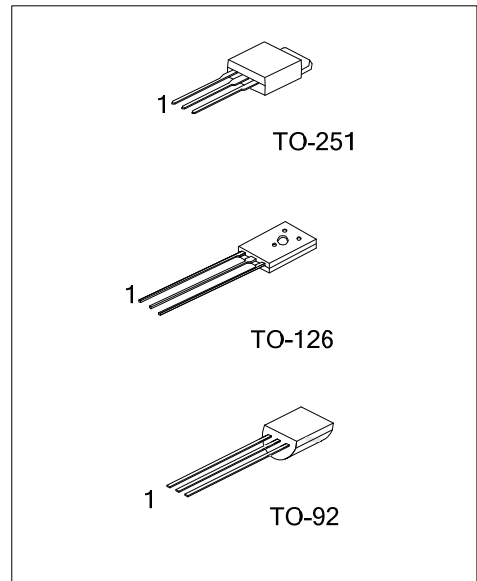
UT2274

NPN SILICON TRANSISTOR

SWITCHING REGULATOR APPLICATIONS

■ FEATURES

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



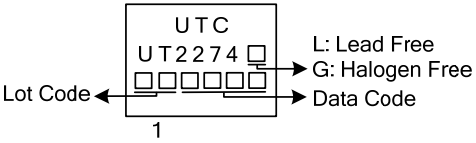
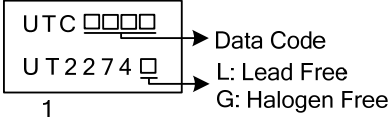
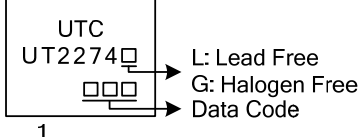
■ ORDERING INFORMATION

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

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

<p>UT2274G-T92-B</p>	<p>(1) B: Tape Box, K: Bulk, T: Tube</p> <p>(2) T92: TO-92, TM3: TO-251, T60: TO-126</p> <p>(3) 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 </p> <p> 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 □ → L: Lead Free → G: Halogen Free □□ □ → Data Code 1 </p>

■ 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.

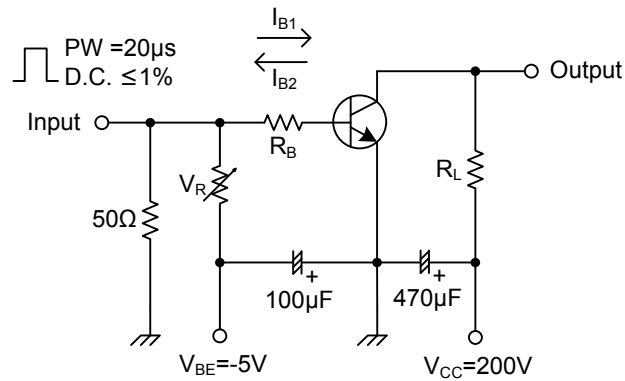
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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	μA
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	μs
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	μs

■ SWITCHING TIME TEST CIRCUIT



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