



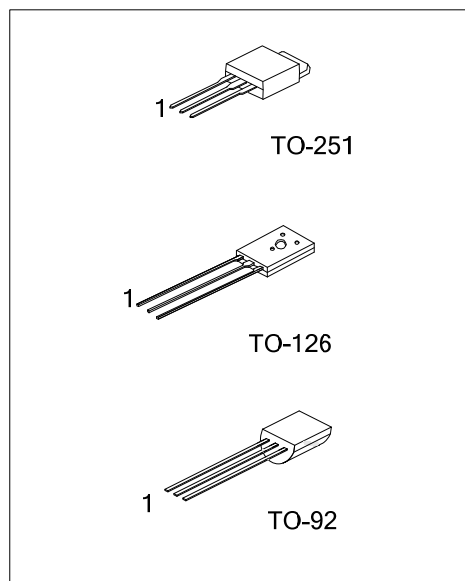
UT2274

NPN SILICON TRANSISTOR

SWITCHING REGULATOR APPLICATIONS

■ FEATURES

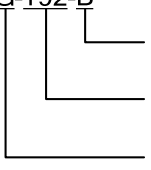
- * High breakdown voltage ($V_{CBO} \geq 1400V$).
- * Ultra high-speed switching.
- * Wide SOA.



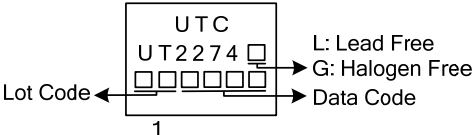
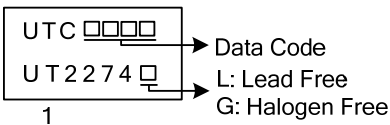
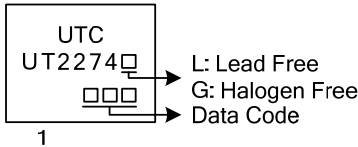
■ ORDERING INFORMATION

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

UT2274G-T92-B 		(1) Packing Type	(1) B: Tape Box, K: Bulk, T: Tube
		(2) Package Type	(2) T92: TO-92, TM3: TO-251, T60: TO-126
		(3) Green Package	(3) G: Halogen Free and Lead Free, L: Lead Free

MARKING

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

■ **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.

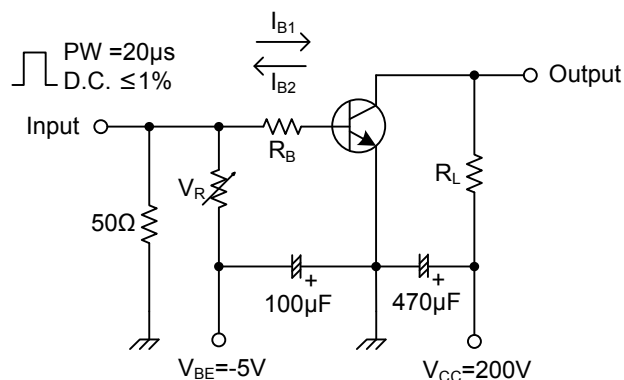
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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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