



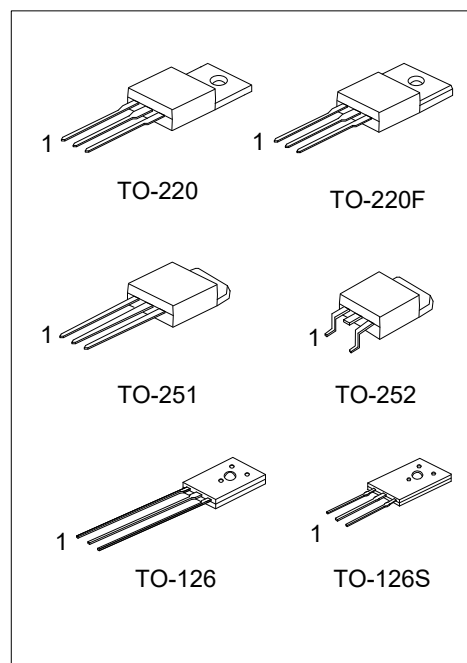
UT2274

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-T6S-K	UT2274G-T6S-K	TO-126S	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

UT2274G-T92-x-B (1) Packing Type (2) Pin Assignment (3) Package Type (4) Green Package	(1) B: Tape Box, K: Bulk, T: Tube (2) refer to Pin Assignment (3) T92: TO-92, TM3: TO-251, T60: TO-126 T6S: TO-126S (4) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

PACKAGE	MARKING
TO-251	UTC UT2274 Lot Code → [] [] [] [] [] → Date Code 1 L: Lead Free G: Halogen Free
TO-126 TO-126S	UTC [] [] [] UT2274 [] Date Code → [] → L: Lead Free G: Halogen Free 1
TO-92	UTC UT2274 Pin Code → [] [] [] → L: Lead Free G: Halogen Free Date Code 1

■ 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	mW
	TO-126S			
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.

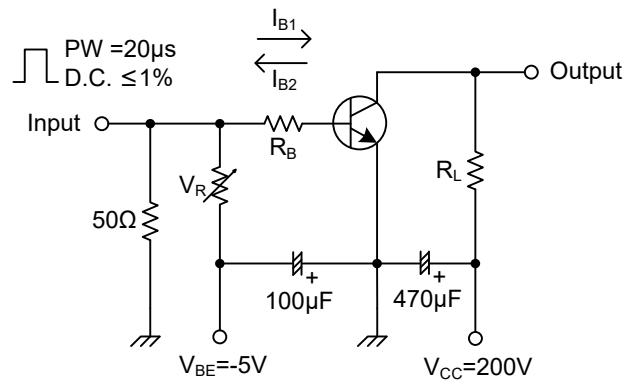
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

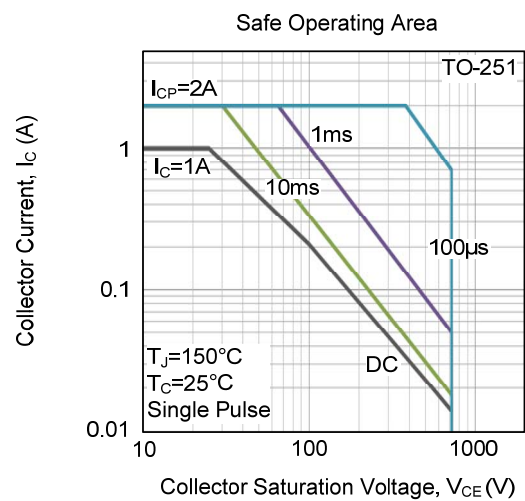
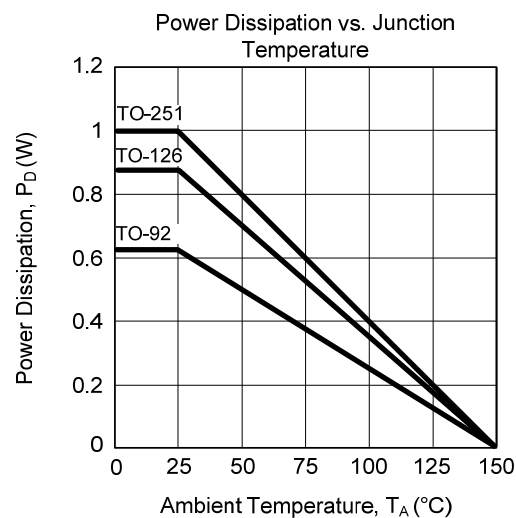
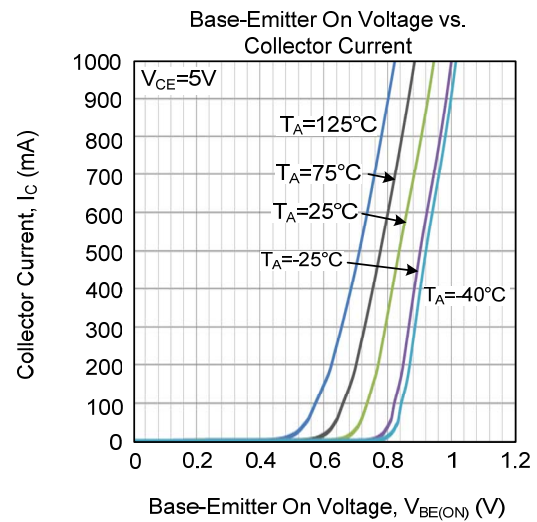
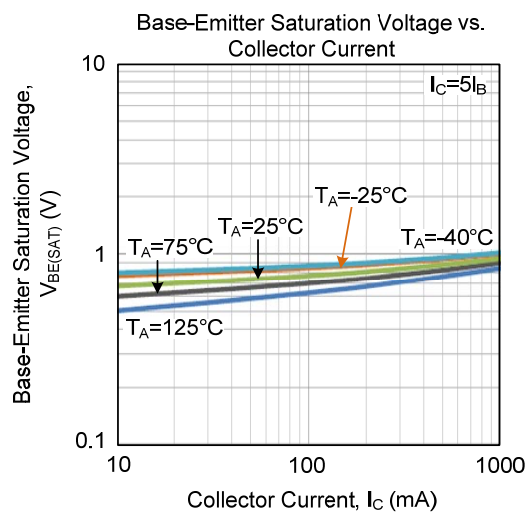
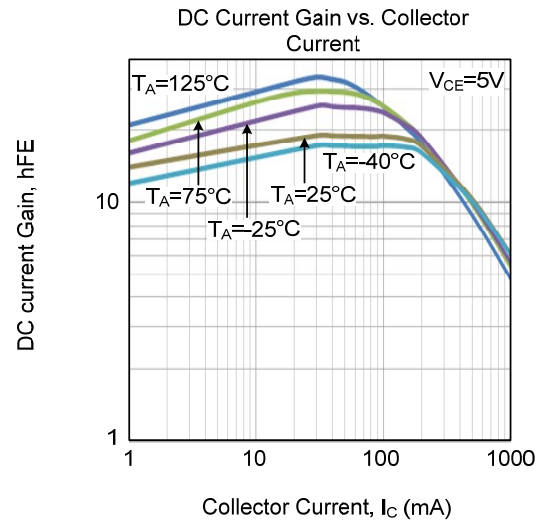
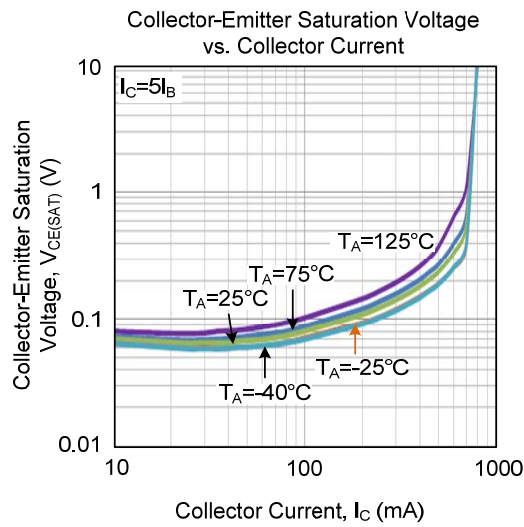
■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

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

■ SWITCHING TIME TEST CIRCUIT



TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.