



UT2274

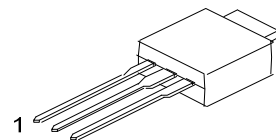
Preliminary

NPN SILICON TRANSISTOR

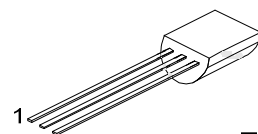
SWITCHING REGULATOR APPLICATIONS

■ FEATURES

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



TO-251



TO-92

■ 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

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

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

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
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

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

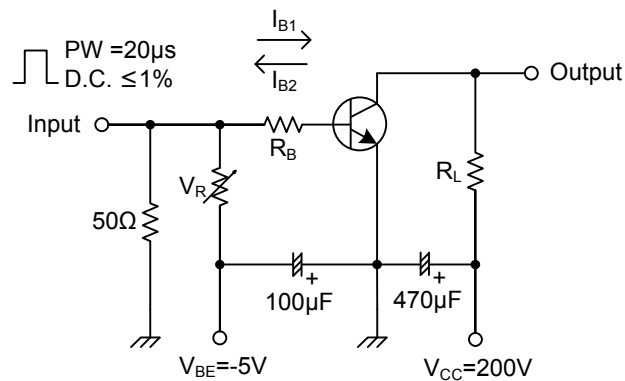
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. $PW \leq 300\mu s$, duty cycle $\leq 10\%$

■ ELECTRICAL CHARACTERISTICS (Ta=25°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}	$V_{CB}=1400\text{ V}$, $R_{BE}=0\Omega$			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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