UNISONIC TECHNOLOGIES CO., LTD

T8177

LINEAR INTEGRATED CIRCUIT

VERTICAL DEFLECTION **BOOSTER**

DESCRIPTION

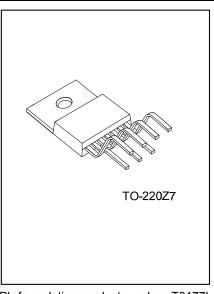
The UTC T8177 is a vertical deflection booster integrated circuit and designed for CRT monitors and high performance TVs. It is intended to delivers flyback voltages up to 70V.

The **T8177** supplies with up to 35V and provides a maximum output current up to 3.0A peak to peak to drive the deflection yoke with a high efficiency.

The UTC T8177 is offered in HEPTAWATT package.

FFATURES

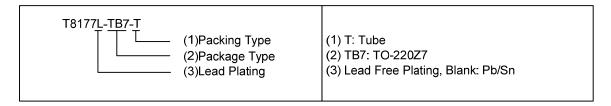
- * Deflection current can be 3.0A peak value
- * Deflection voltage up to 70V (on Pin 5)
- * Flyback Generator
- * Thermal Protection Circuit
- * Supports DC Coupling



*Pb-free plating product number: T8177L

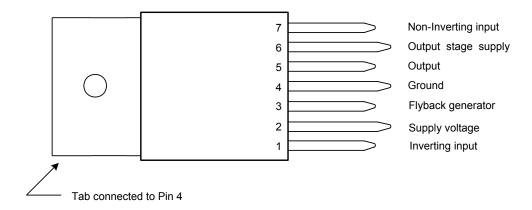
ORDERING INFORMATION

Order Number		Daakaga	Dooking	
Normal	Lead Free Plating	Package	Packing	
T8177-TB7-T	T8177L-TB7-T	TO-220Z7	Tube	

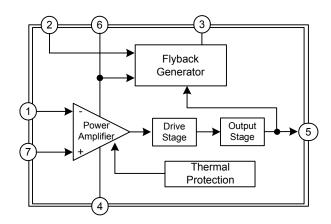


www.unisonic.com.tw 1 of 5 QW-R121-011,A

■ PIN CONFIGURATION



■ BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage (Pin 2) (Note 1)	V _{CC}	40	V
Flyback Peak Voltage (Pin 6) (Note 1)	V ₆	75	V
Amplifier Input Voltage (Pin 1, Pin 7) (Note 1)	V ₁ , V ₇	-0.3 ~ V _S	V
Electrostatic Handling for All Pins (Note 4)	V _{ESD}	2000	V
Maximum Output Peak Current (Note 2, 3)	I _{OUT}	2.5	Α
Maximum Sink Current (First part of Flyback) (t < 1ms)	l ₃	2.5	Α
Maximum Source Current (t < 1ms)	l ₃	2.5	Α
Junction Temperature	TJ	+150	$^{\circ}\mathbb{C}$
Operating Ambient Temperature	T _{OPR}	-20 ~ +75	$^{\circ}\mathbb{C}$
Storage Temperature	T _{STG}	-40 ~ + 150	$^{\circ}\mathbb{C}$

Notes: 1. Reference to GND pin.

- 2. For $t \le 10\mu S$, I_O can be up to 4A peak to peak (up to 120Hz).
- 3. Provided output transistor SOA (see Figures 1 and 2).
- 4. Equivalent to discharging a 100pF capacitor through a $1.5k\Omega$ series resistor.
- 5. 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.

■ THERMAL DATA

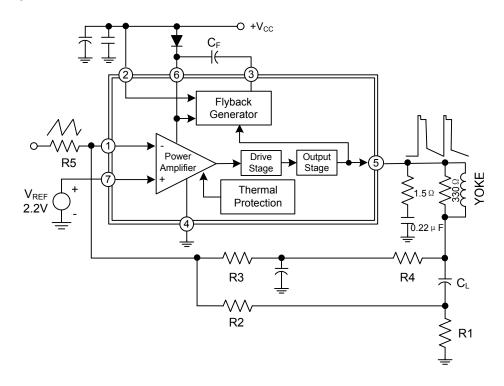
PARAMETER		RATINGS	UNIT
Junction-Case Thermal Resistance	θ_{JC}	3	°C/W
Temperature for Thermal Shutdown	T _{SHDN}	150	$^{\circ}\!\mathbb{C}$
Maximum Junction Temperature	TJ	120	$^{\circ}\!\mathbb{C}$

■ ELECTRICAL CHARACTERISTICS (V_{CC} = 35V, T_A = 25°C, unless otherwise specified)

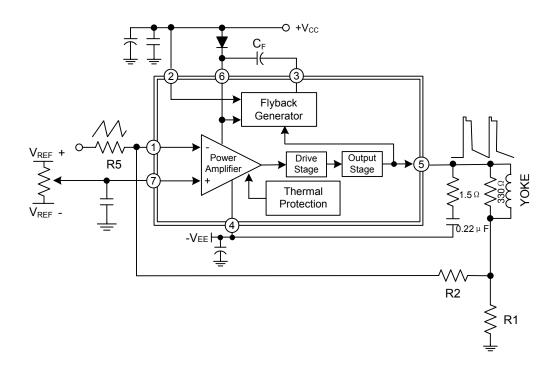
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Supply Voltage Range	V_{CC}		10		35	V
Output Saturation Voltage to GND (Pin 4)	V_{5L}	I ₅ = 1.5A		1.0	1.7	V
Output Saturation Voltage to Supply (Pin 6)	V_{5H}	I ₅ = -1.5A		1.8	2.3	V
Diode Forward Voltage Between Pins 5-6	V _{D5-6}	I ₅ = 1.5A		1.8	2.3	V
Diode Forward Voltage Between Pins 3-2	V _{D3-2}	I ₃ = 1.5A		1.6	2.2	V
Saturation Voltage on Pin 3	V_{3SL}	I ₃ = 20mA		0.4	1.0	V
Saturation Voltage to Pin 2 (2nd part of flyback)	V _{3SH}	I ₃ = -1.5A		2.1	2.8	V
Max. Peak Output Current	Io				1.5	Α
Pin 2 Quiescent Current	l ₂	I ₃ =0, I ₅ =0		9	20	mA
Pin 6 Quiescent Current	I 6	$I_3 = 0$, $I_5 = 0$, $V_6 = 35V$	8	15	30	mA
Amplifier Bias Current	I ₁	$V_1 = 22V, V_7 = 23V$		-0.15	-1.0	μΑ
Amplifier Bias Current	l ₇	$V_1 = 23V, V_7 = 22V$		-0.15	-1.0	μΑ
Offset Voltage	$V_{I(OFF)}$				7	mV
Offset Drift Versus Temperature	DV _{I(OFF)} /dt			-10		µV/°C
Voltage Gain	G _V		80			dB

APPLICATION CIRCUITS

AC COUPLING

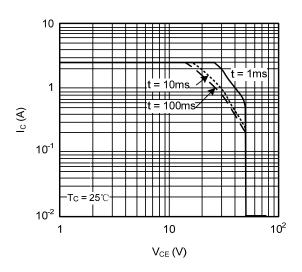


DC COUPLING

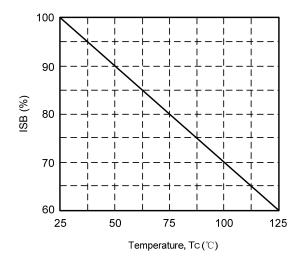


TYPICAL CHARACTERISTICS

Output Transistors SOA (for secondary breakdown)



Secondary Breakdown Temperature Derating Curve (ISB = secondary breakdown current)



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