



PA5417

LINEAR INTEGRATED CIRCUIT

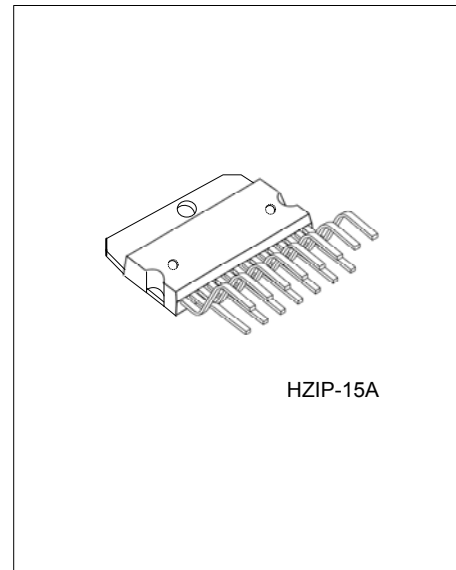
HIGH-OUTPUT DUAL POWER AMPLIFIER

DESCRIPTION

The UTC **PA5417** is a dual power amplifier of 6~15V-compatible for radio cassette/Mini compo players use. It is developed to equip with standby switching functions for excellent total harmonic distortion and other basic characteristics.

FEATURES

- * Operating power supply voltage range from 6V to 15V.
- * High output.
 - $P_{OUT} = 2.8W$ ($V_{CC} = 9V, R_L = 3\Omega, THD = 10\%$)
 - $P_{OUT} = 5.0W$ ($V_{CC} = 12V, R_L = 3\Omega, THD = 10\%$)
- * Excellent audio quality
 - $THD = 0.1\%$ ($f = 1kHz, P_{OUT} = 0.5W$)
 - $eN = 0.3mV_{rms}$ ($R_g = 10k\Omega$)
 - $RR = 55dB$ ($f_{RR} = 100Hz$)
- * Switching noise ("pop" noise) generated when the power is switched on and off is small.
- * Ripple mixing when motor starts has been prevented.
- * Built-in thermal shutdown circuit.
- * Built-in standby switch that output is not influenced.
- * Soft clipping.



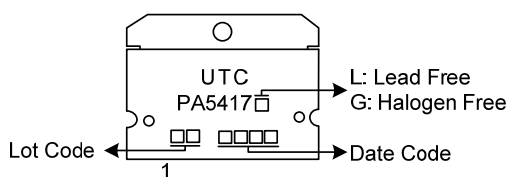
HZIP-15A

ORDERING INFORMATION

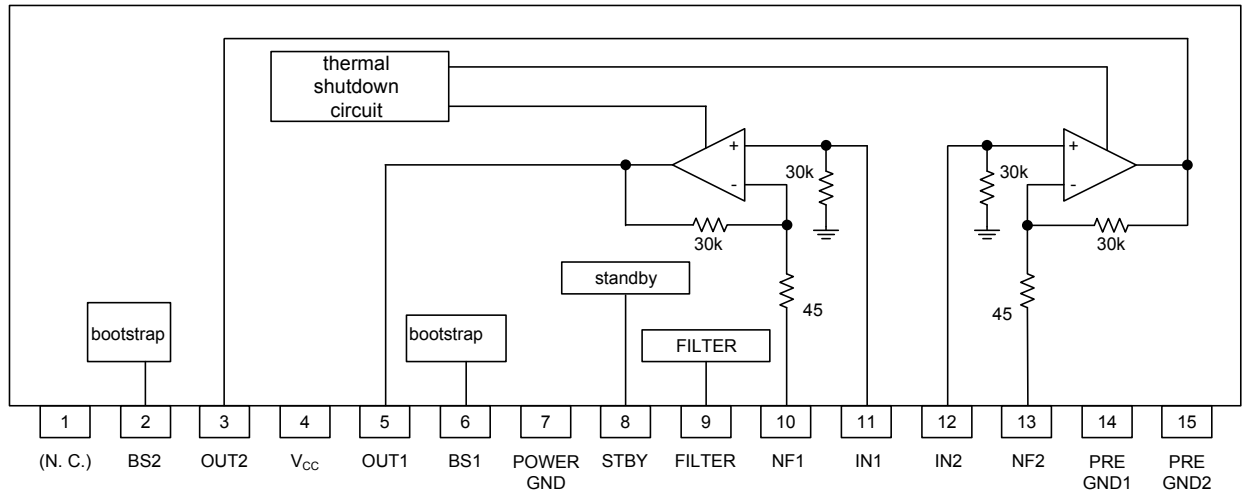
Ordering Number		Package	Packing
Lead Free	Halogen Free		
PA5417L-J15-A-T	PA5417G-J15-A-T	HZIP-15A	Tube

<p>PA5417G-J15-A-T</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) T: Tube (2) J15-A: HZIP-15A (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Power Supply Voltage	V_{CC}	20 (Note 2)	V
Power Dissipation ($T_a=75^\circ\text{C}$, infinite heat sink)	P_D	15	W
Junction Temperature	T_J	+125	$^\circ\text{C}$
Operating Temperature	T_{OPR}	-20~ +75	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^\circ\text{C}$

Note 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. Must be within standby values.

■ RECOMMENDED OPERATING CONDITIONS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Power Supply Voltage	V_{CC}	6.0 ~ 15.0	V

■ ELECTRICAL CHARACTERISTICS

($T_{V_{CC}}=9\text{V}$, $R_L=3\Omega$, $R_F=120\Omega$, $R_G=600\Omega$, $F=1\text{kHz}$, OLT mode, $T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	CONIDITIONS	MIN	TYP	MAX	UNIT
Quiescent Current	I_Q	$V_{IN}=0\text{Vrms}$		24	45	mA
Rated Output Voltage 1	P_{OUT1}	THD=10%, $V_{CC}=9\text{V}$	2.2	2.8		W
Rated Output Voltage 2	P_{OUT2}	THD=10%, $V_{CC}=12\text{V}$	4.0	5.0		W
Closed-Loop Voltage Gain	G_{VC}		43	45	47	dB
Output Noise Voltage	eN	$R_g=10\text{k}\Omega$, DIN AUDIO		0.3	1.0	mVrms
Total Harmonic Distortion	THD	$P_{OUT}=0.5\text{W}$		0.1	1.0	%
Ripple Rejection	RR	$f_{RR}=100\text{Hz}$, $V_{RR}=-10\text{dBm}$	42	55		dB
Crosstalk	C_T	$V_{OUT}=0\text{dBm}$	48	65		dB
Circuit Current (with Standby Switch off)	I_{OFF}			0	20	μA
Standby Pin Current When on	I_{STNBY}	$V_{STNBY}=V_{CC}$		0.15	0.4	mA
Standby Pin Control Voltage	Activated	V_{STH}	3.5			V
	Not activated	V_{STL}			1.2	V

■ TEST CIRCUIT

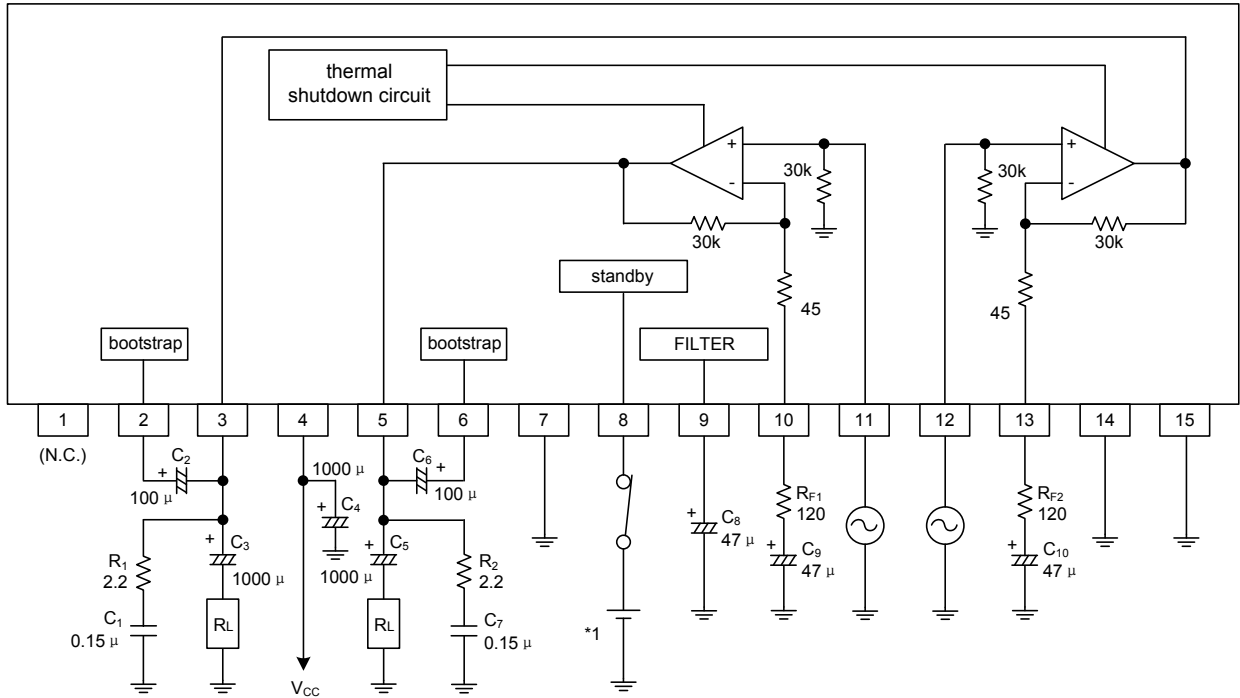


Fig.1

APPLICATION CIRCUITS

OTL Mode

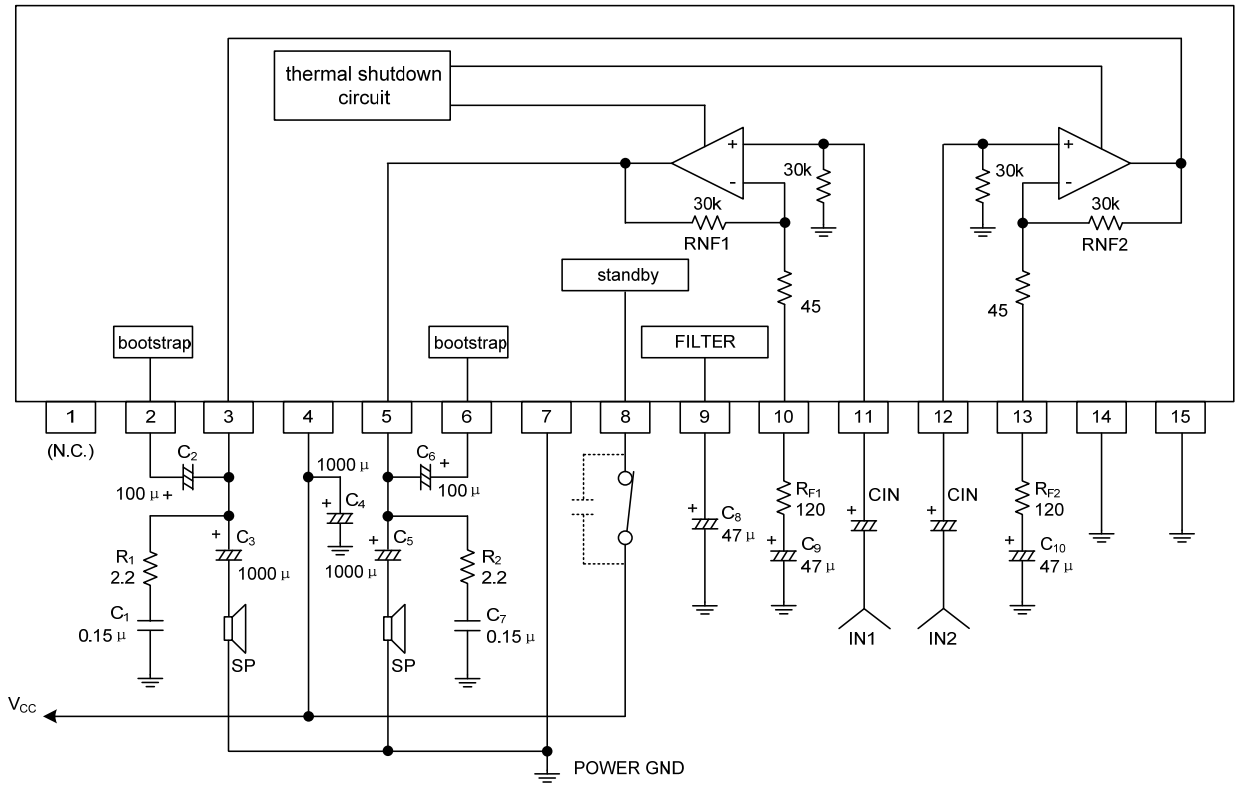
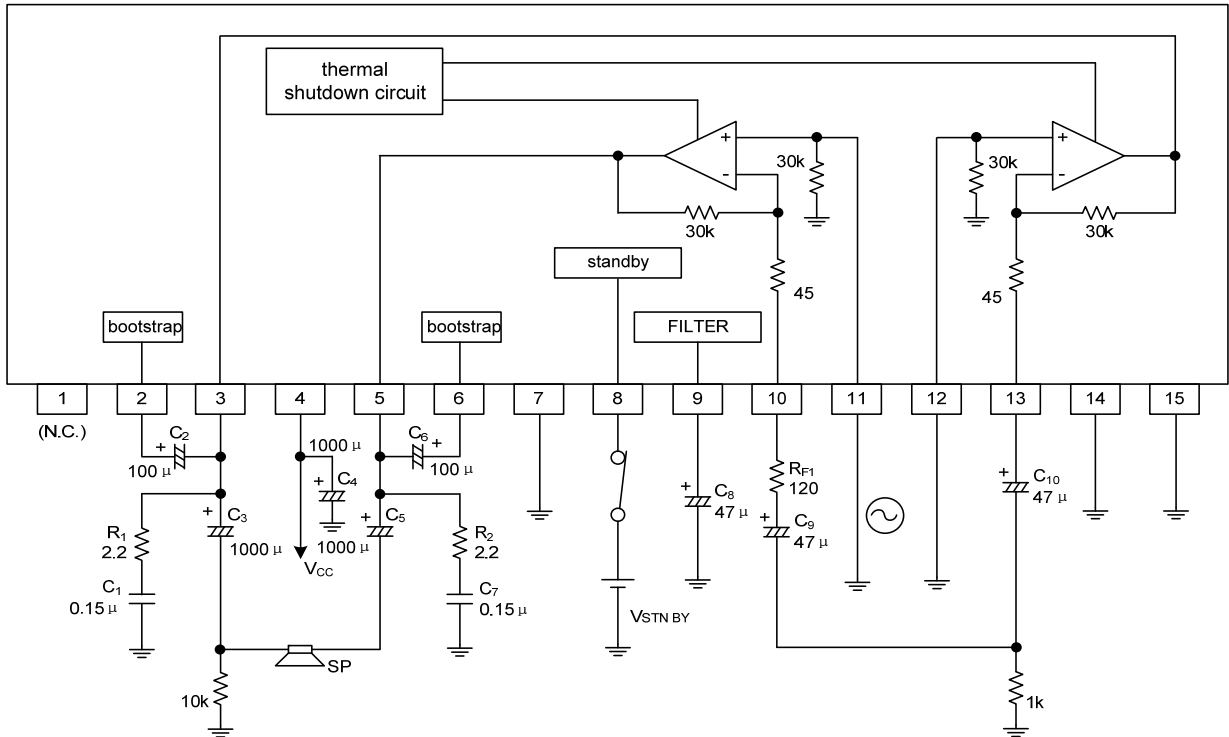


Fig.2

BTL Mode

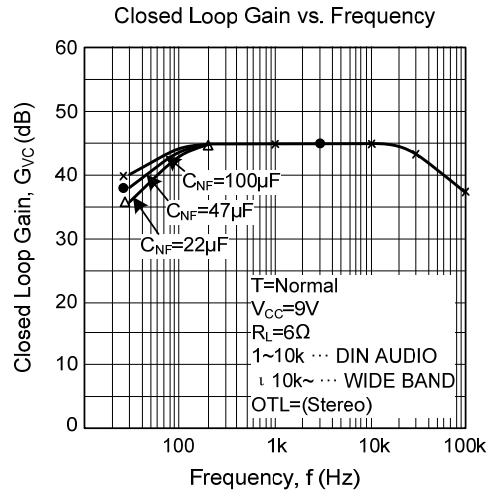
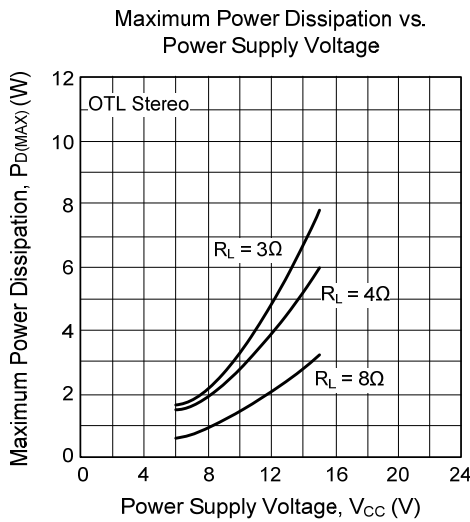
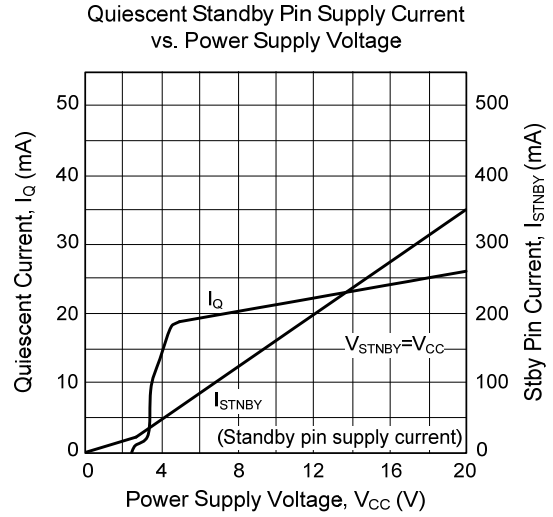
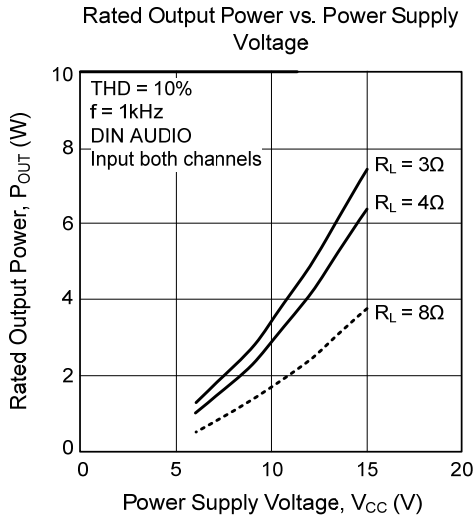


Note : 3pin, 5pin need coupling capacitors (C3, C5 100 μF) for DC offset voltage.

Fig.3

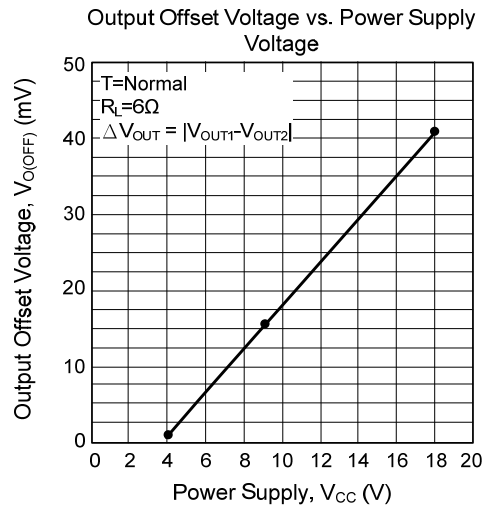
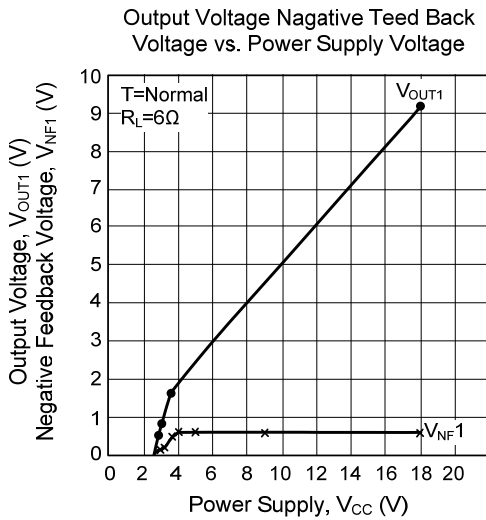
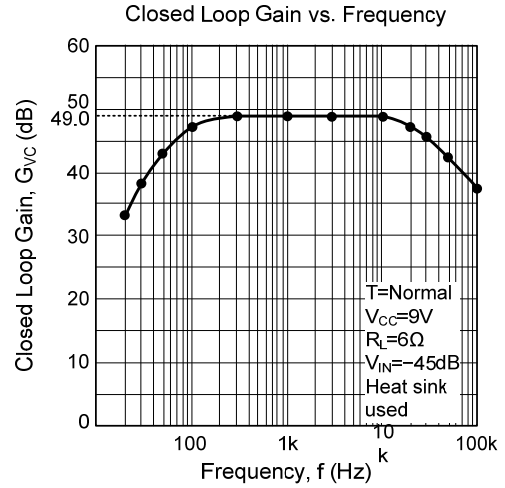
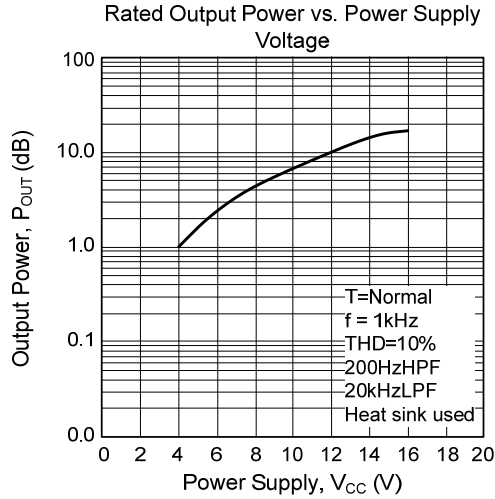
■ TYPICAL CHARACTERISTICS

OTL Mode



■ TYPICAL CHARACTERISTICS

BTL Mode



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