

## 18W CAR RADIO POWER AMPLIFIER—YD1028

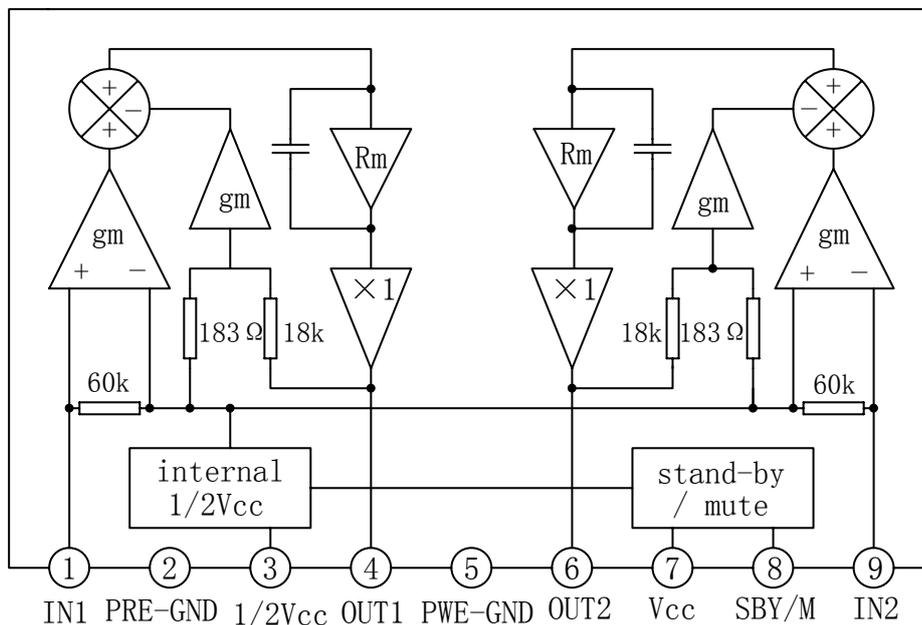
### DESCRIPTION

The YD1028 is an integrated class-B dual output amplifier in a 9-lead single in-line (TO220Z9) plastic power package. The device is primarily developed for car radio applications.

### FEATURES

- \*Requires very few external components for Bridge Tied Load (BTL), Stereo or BTL application;
- \*High output power, Fixed gain, Good ripple rejection;
- \* Identical inputs (inverting and non-inverting), Low offset voltage at output (important for BTL);
- \*Mute/stand-by switch, No switch-on/switch-off plop;
- \*Load dump protection, AC and DC short-circuit-safe to ground and Vcc, Thermally protected;
- \*Reverse polarity safe;
- \*Capability to handle high energy on outputs (Vcc=0V);
- \*Protected against electrostatic discharge.

### BLOCK DIAGRAM



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**ABSOLUTE MAXIMUM RATINGS** (Tamb=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	VALUE	UNIT
Supply Voltage Operating	Vcc		18	V
Non-operating	Vcc		20	V
AC And DC Shot-circuit-safe Voltage	Vccsc		18	V
Reverse Polarity	Vccr		6	V
Non-repetitive Peak Output Current	I <sub>OSM</sub>		4	A
Repetitive Peak Output Current	I <sub>ORM</sub>		2.5	A
Total Power Dissipation	P <sub>D</sub>	Infinite Heat Sink	20	W
		No Heat Sink	4.0	
Operating Temperature	Topr		-20~+75	°C
Storage Temperature	Tstg		-55~+150	°C

**ELECTRICAL CHARACTERISTICS**

**DC CHARACTERISTICS**

(Vcc=13.2V, Tamb=25°C, BTL, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage Range	Vcc		6.0	13.2	18.0	V
Total Quiescent Current	Iccq			40	60	mA
DC Output Voltage	V <sub>O</sub>			6.2		V
DC Output Offset Voltage	ΔV <sub>4-6</sub>	Operating/Mute			250	mV
Switch-on Voltage Level	V <sub>ON</sub>	Operating	8.5			V
Mute Condition	V <sub>mute</sub>	Mute	3.3		6.4	V
Stand-by Condition	V <sub>st-by</sub>	Stand-by			2.0	V
DC Current in Stand-by	Iccsb	V <sub>8</sub> ≤ 2.0V			100	μ A
Control Current in Stand-by	I <sub>8sb</sub>	V <sub>8</sub> ≤ 2.0V		12	40	μ A