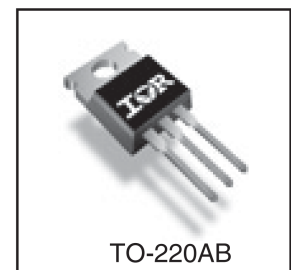
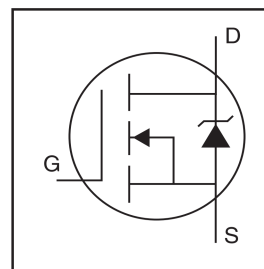


Features

- Key parameters optimized for Class-D audio amplifier applications
- Low $R_{DS(ON)}$ for improved efficiency
- Low Q_G and Q_{SW} for better THD and improved efficiency
- Low Q_{RR} for better THD and lower EMI
- 175°C operating junction temperature for ruggedness
- Can deliver up to 150W per channel into 4Ω load in half-bridge topology

Key Parameters		
V_{DS}	100	V
$R_{DS(ON)}$ typ. @ 10V	72.5	mΩ
Q_g typ.	15	nC
Q_{sw} typ.	8.3	nC
$R_{G(int)}$ typ.	2.2	Ω
T_J max	175	°C



Description

This Digital Audio MOSFET is specifically designed for Class-D audio amplifier applications. This MOSFET utilizes the latest processing techniques to achieve low on-resistance per silicon area. Furthermore, Gate charge, body-diode reverse recovery and internal Gate resistance are optimized to improve key Class-D audio amplifier performance factors such as efficiency, THD and EMI. Additional features of this MOSFET are 175°C operating junction temperature and repetitive avalanche capability. These features combine to make this MOSFET a highly efficient, robust and reliable device for ClassD audio amplifier applications.

Absolute Maximum Ratings

	Parameter	Max.	Units
V_{DS}	Drain-to-Source Voltage	100	V
V_{GS}	Gate-to-Source Voltage	±20	
$I_D @ T_C = 25^\circ C$	Continuous Drain Current, $V_{GS} @ 10V$	18	A
$I_D @ T_C = 100^\circ C$	Continuous Drain Current, $V_{GS} @ 10V$	13	
I_{DM}	Pulsed Drain Current ①	57	
$P_D @ T_C = 25^\circ C$	Power Dissipation ④	60	W
$P_D @ T_C = 100^\circ C$	Power Dissipation ④	30	
	Linear Derating Factor	0.4	W/°C
T_J	Operating Junction and	-55 to + 175	°C
T_{STG}	Storage Temperature Range		
	Soldering Temperature, for 10 seconds (1.6mm from case)	300	
	Mounting torque, 6-32 or M3 screw	10lb·in (1.1N·m)	

Thermal Resistance

	Parameter	Typ.	Max.	Units
$R_{\theta JC}$	Junction-to-Case ④	—	2.5	°C/W
$R_{\theta CS}$	Case-to-Sink, Flat, Greased Surface	0.50	—	
$R_{\theta JA}$	Junction-to-Ambient ④	—	62	

Notes ① through ⑤ are on page 2

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