Digital Haptic Driver

1 LRA/ERM Haptic Driver

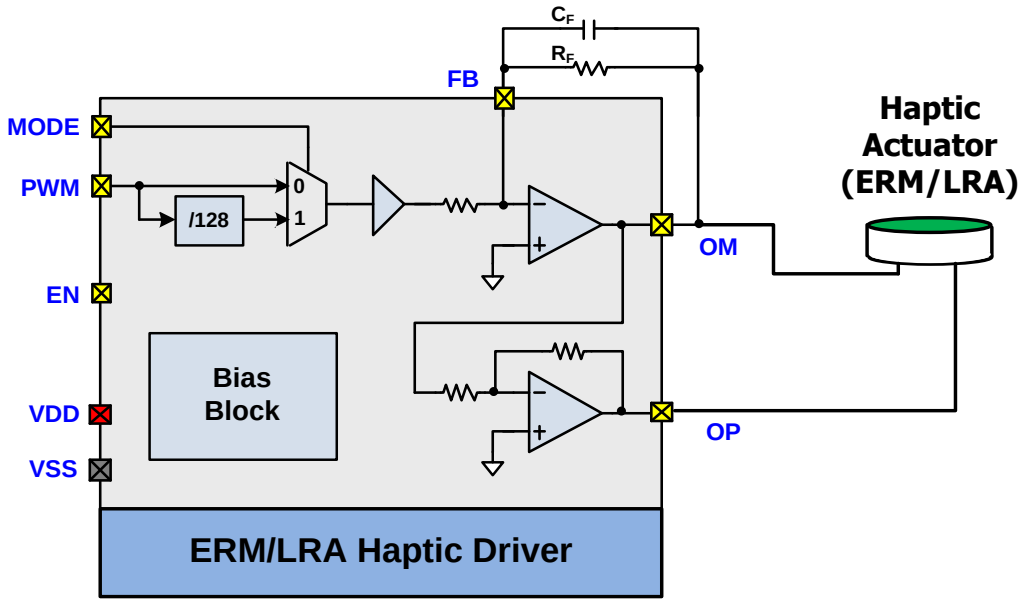

Figure 1. Block Diagram of ERM/LRA Haptic Driver

1.1 Pin Descriptions

Table 1. Pin Description

Pin Name	Type	I/O	Function
			Power
VDD	AP	TBD	Analog Power Supply (3.3V)
VSS	AG	TBD	Analog Ground (0V)
			Digital
EN	DI	TBD	Enable Operation (Active High)
PWM	DI	TBD	Pulse Width Modulation(PWM) Input
MODE	DI	TBD	ERM/LRA Mode Selection (L=ERM, H=LRA)
			Analog
FB	AB	TBD	Internal Amp. Negative Feedback
OP	AO	TBD	Driver Positive(+) Output
OM	AO	TBD	Driver Negative(-) Output

1.2 Electrical Parameters

Table 2. Absolute Maximum Rating

Symbol	Description	Specification			Unit
		Min	Typ.	Max	
$AVDD_{MAX}$	Analog 3.3 Supply Voltage			3.6	[V]
T_{STG}	Storage Temperature	-65		150	[℃]
T_{JMAX}	Junction Temperature			150	[℃]

Table 3. Recommended Operating Condition

Symbol	Description	Specification			Unit
		Min	Typ.	Max	
AVDD	Supply Voltage	2.4	3.0	3.6	[V]
T_{OP}	Operating Temperature	-40		85	[℃]

Table 4. Electrical Characteristics

(AVDD = 3.0 V, T_A = Typ. 25°C)

Symbol	Description	Specification			Unit
		Min	Typ.	Max	
V_{IH}	Logic Input High Level	1.0			[V]
V_{IL}	Logic Input Low Level			0.4	[V]
I_{OP}	Quiescent Supply Current Consumption @ No load condition		3		[mA]
I_{PD}	Power Down Mode Current Consumption @ No load condition		1		[uA]
I_{OUT}	Output Current		200		[mA]
$T_{STARTUP}$	Start-up Time			5	[ms]
V_{OFFSET}	Output Offset Voltage @ 50% Duty PWM	-50		50	[mV]
V_{OH}	Output High-Voltage		150	300	[mV]
V_{OL}	Output Low-Voltage		150	300	[mV]