

DC-DC Converter Short Form

MPDRX103S (Ultra High Speed Response POL)

■ Features

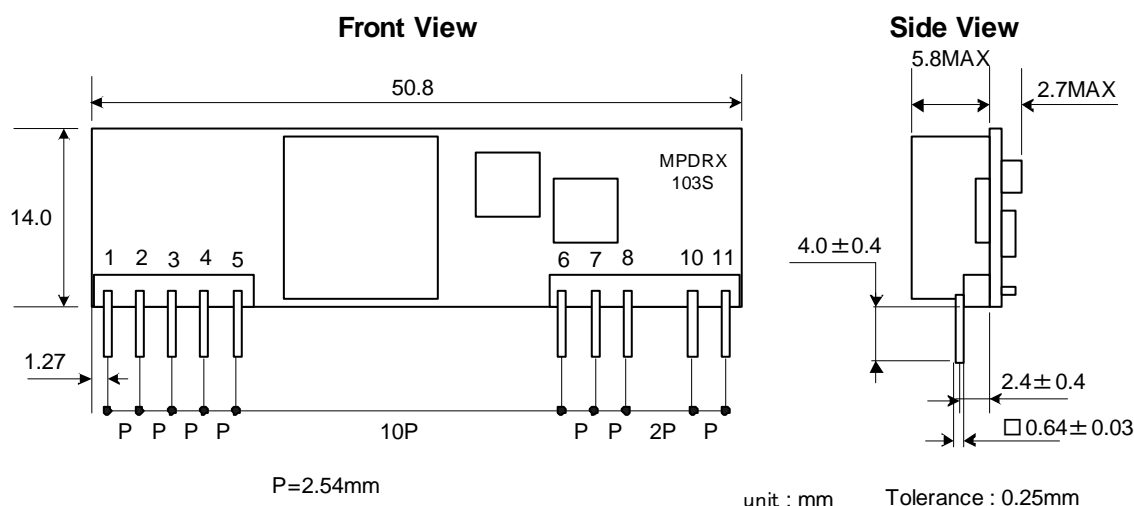
- 12V Input Voltage
- 16Amp. Output Current
- Ultra High Speed Response
- Wide Output Voltage (0.8-1.8V)
- On/Off Control Function
- Short Circuit Protection
- Over Temperature Protection
- SIP Type



■ GENERAL SPECIFICATIONS (Ta=25°C)

Item	Symbol	Condition	MIN.	TYP.	MAX.	UNIT
Input Voltage	Vin		10.8	12.0	13.2	V
Rising UVLO	UVLO-r		9.3	10.0	10.8	V
Falling UVLO	UVLO-f		9.0	9.5	10.3	V
Output Voltage	Vout	Vin=12V	0.80		1.80	V
Output Current	Iout		0		16	A
Ripple Voltage	Vrip	Vin=12V,Vo=1.8V,Io=16A.		15		mVpp
Efficiency	EFF	Vin=12V,Vo=1.8V,Io=16A.		86		%

■ DIMENSIONS AND PIN ASSIGN

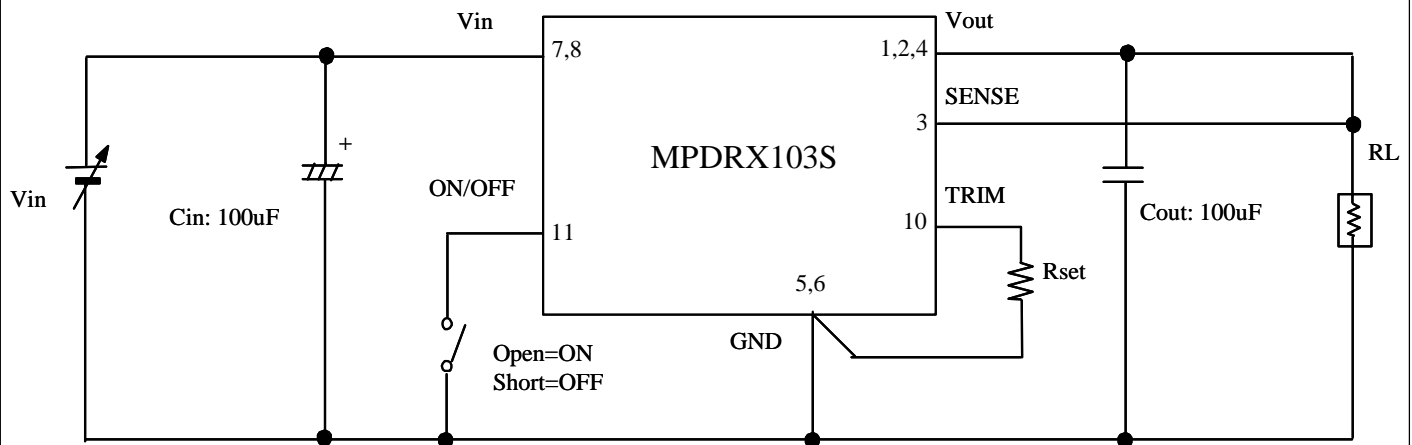


Pin No.	Signal	Pin No.	Signal
1,2,4.	Vout	7,8.	Vin
3.	SENSE	10.	TRIM
5,6.	GND	11.	ON/OFF

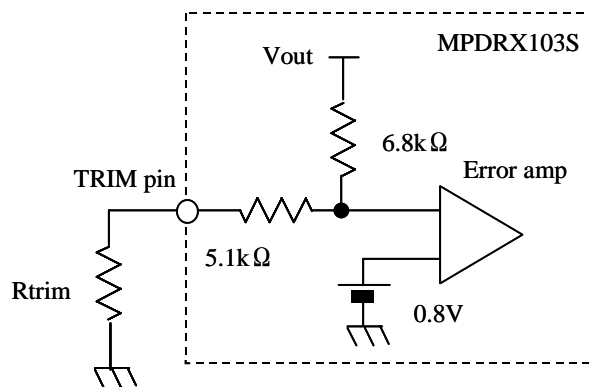
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2. This datasheet has only typical specifications because there is no space for detailed specifications. Therefore, please approve our product specifications or transact the approval sheet for product specifications before ordering.

■ TEST CIRCUIT



■ OUTPUT VOLTAGE ADJUSTMENT



$$R_{trim} = \frac{5.44}{V_{out}[V] - 0.8[V]} - 5.1[k\Omega]$$

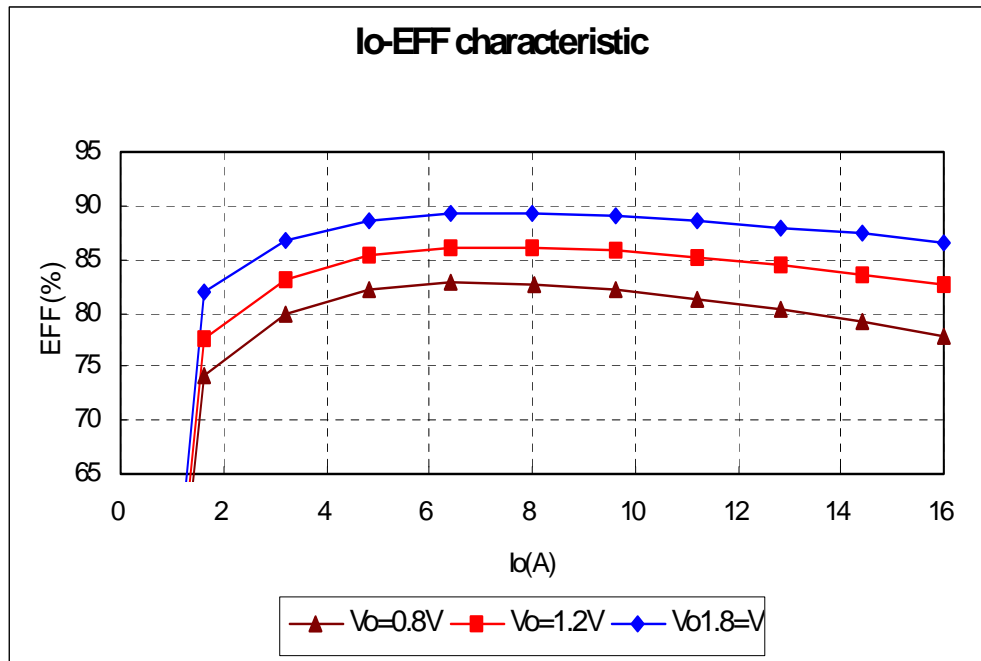
<RTRIM CALCULATION EXAMPLE>

Vout(V)	Calculated Rtrim(ohm)	Rtrim example(ohm)
1.8	340	340 + 10
1.5	2671	2.4k + 270
1.2	8500	8.1k + 390
1.0	22100	22k + 100
0.8	∞	Open

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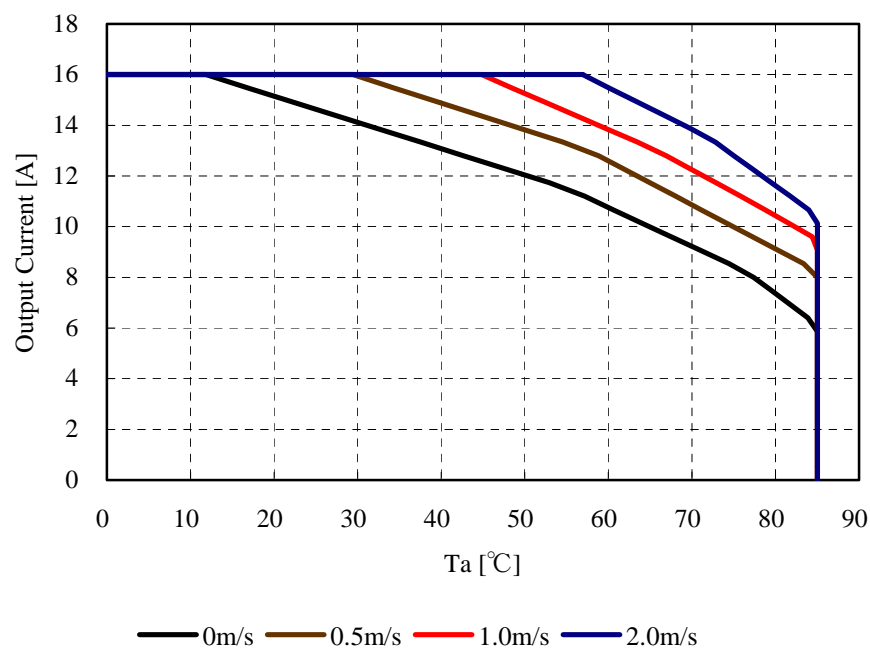
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■ EFFICIENCY CHARACTERISTICS



■ THERMAL DERATING

MPDRX103S Thermal Derating
[Vin=12V , Vout=1.8V]

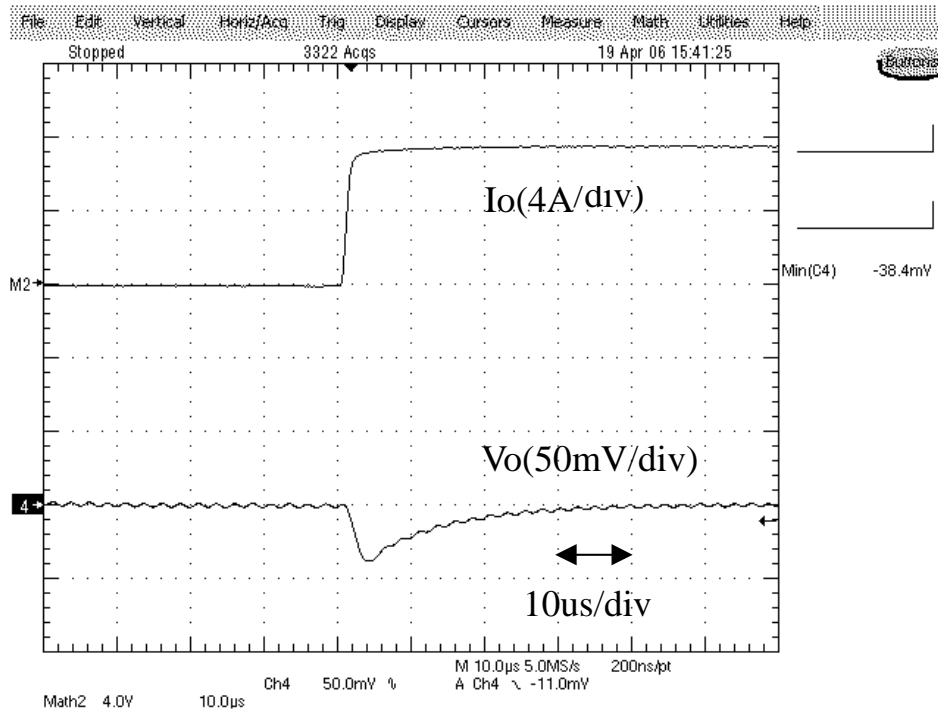


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■ THERMAL DERATING

$V_{in}=12V$, $V_o=1.8V$, $I_o=8A$ to $16A$, $di/dt=2A/\mu s$, $C_{out}=100\mu F$



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