

DC-DC Converter Short Form

MPDRX004S (Ultra High Speed Response POL)

■ Features

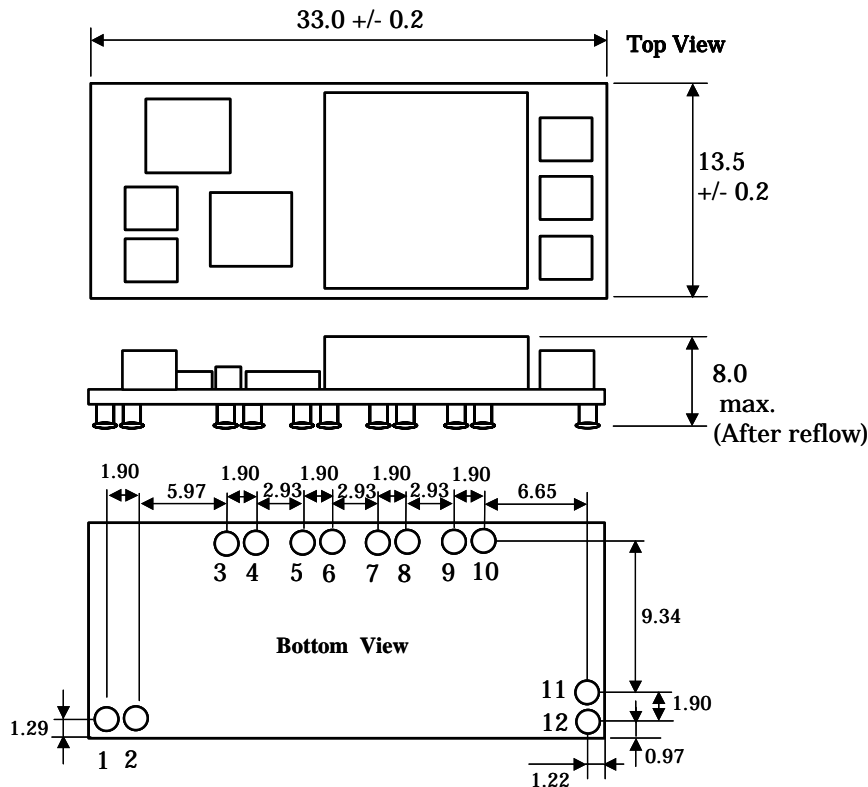
- 7-14V Input Voltage
- 12Amp. Output Current
- Ultra High Speed Response
- Wide Output Voltage (0.8-1.8V)
- On/Off Control Function
- Short Circuit Protection
- Over Temperature Protection
- Austin Lynx Pin Compatible



■ GENERAL SPECIFICATIONS (Ta=25°C)

Item	Symbol	Condition	MIN.	TYP.	MAX.	UNIT
Input Voltage	Vin		7	12	14	V
Output Voltage	Vout		0.80		1.80	V
Output Current	Iout		0		12	A
Ripple Voltage	Vrip	Vin=12V,Vo=1.8V,Io=12A.		15	40	mVpp
Efficiency	EFF	Vin=12V,Vo=1.8V,Io=12A.		88		%

■ DIMENSIONS AND PIN ASSIGN

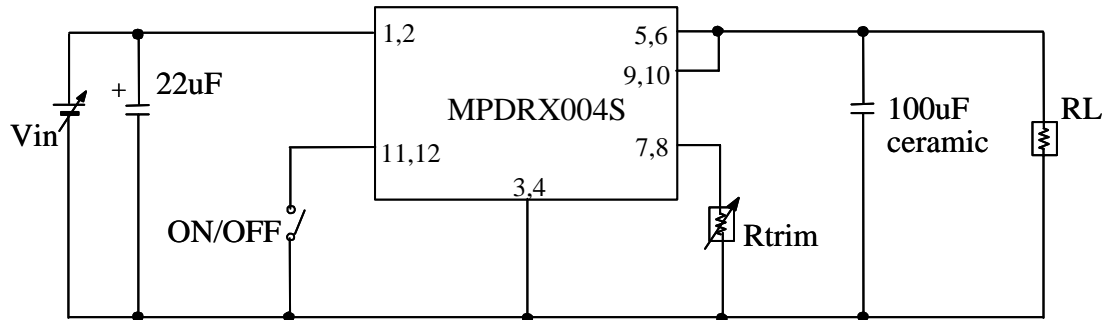


Pin No.	Signal
1,2.	Vin
3,4.	GND
5,6.	Vout
7,8.	TRIM
9,10.	SENSE
11,12.	ON/OFF

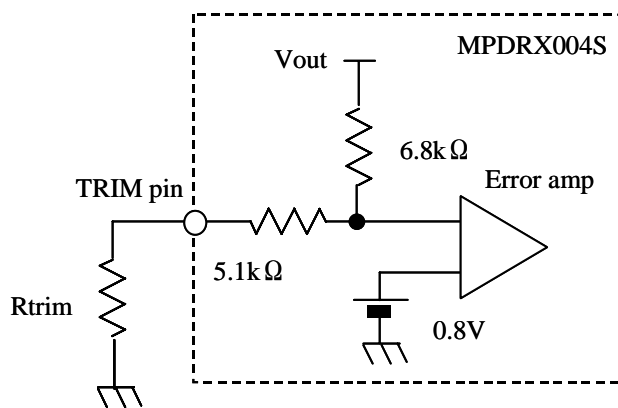
Note:

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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



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

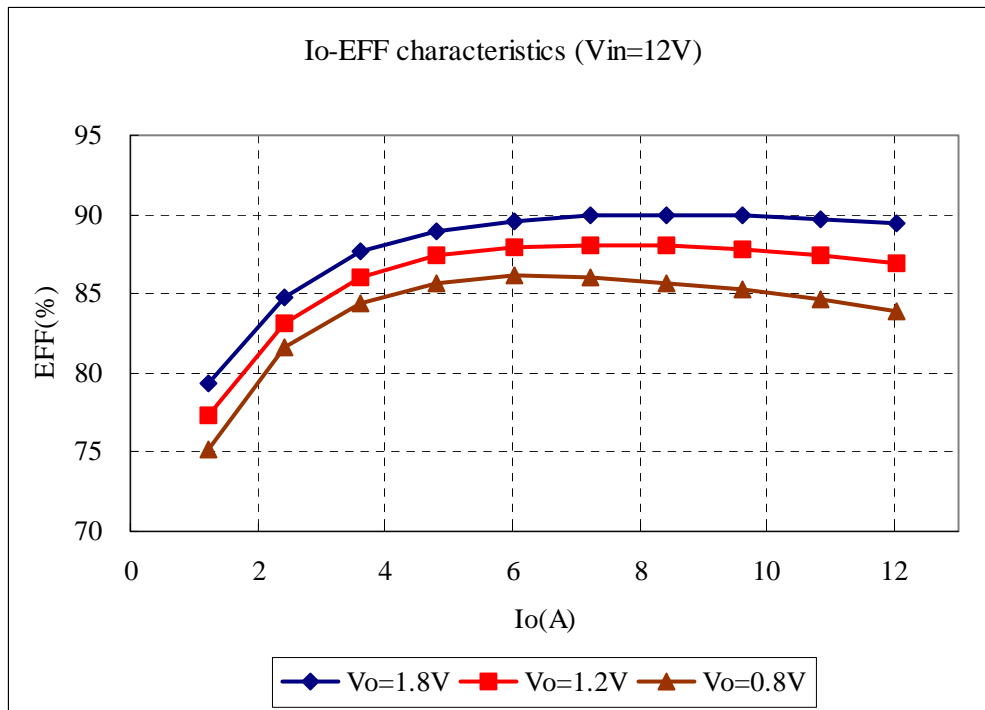
<RTRIM CALCULATION EXAMPLE>

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

⚠ Note:

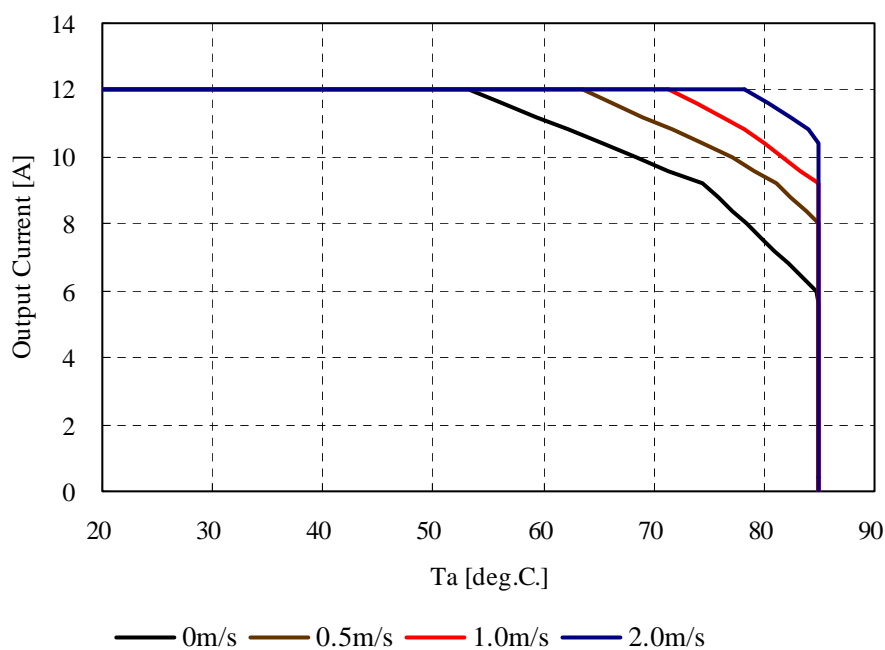
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■ EFFICIENCY CHARACTERISTICS



■ THERMAL DERATING

MPDRX004S Thermal Derating
[Vin=12V , Vout=1.8V]

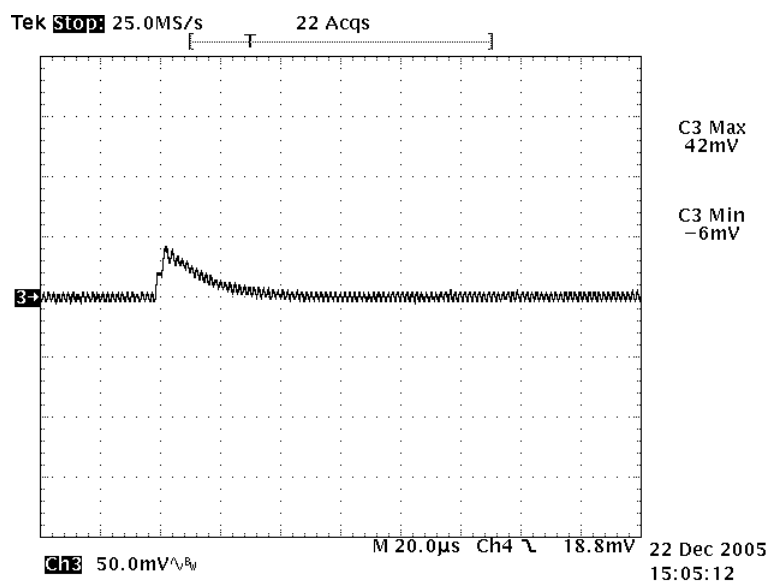
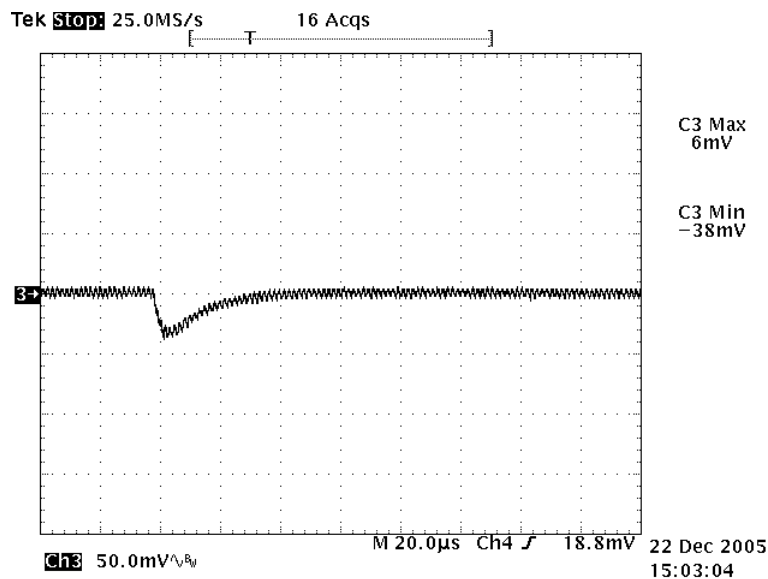


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■ TRANSIENT RESPONSE

$V_{in}=12V$, $V_o=1.8V$, $I_o=6A \leftrightarrow 12A$
 $di/dt=2A/\mu s$, $C_{out}=100\mu F$



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