



DC/DC 铁路机车电源模块

DC/DC Railway locomotive power supply module

JWDR--75W 单路输出系列

JWDR--75W single output series

典型性能 Typical Performance

- ◆外形尺寸: 88.9*63.5*17.0 (mm)
Dimension: 88.9*63.5*17.0 (mm)
- ◆宽输入电压范围
Wide range input voltage
- ◆105℃长寿命电解电容
105℃ long life electrolytic capacitors
- ◆高效率、高功率密度、低纹波
High efficiency、High power density、Low ripple & noise
- ◆黑金属外壳, 八面屏蔽, 通孔安装
Black metal shell, Eight face shield, Hole is installed
- ◆安规: EN60950
Ann rules: EN60950

输入特性 Input Features



输入电压范围 Input voltage range	标称 110V Nominal voltage 110V 标称 110V (W) Nominal voltage 110V(W)	66~160VDC 45~135VDC
遥控端(低电平遥控) Remote ON/OFF(Low level remote)	ON 高电平或悬空工作 High level or vacant-Turn on OFF 低电平或接地关断 Low level or connect ground-Turn off	3.5Vdc ~ +Vin ≤0.3Vdc
输入欠压保护 Input undervoltage protection	低于低端输入电压, 电源关断输出, 自恢复 Lower than the low-input voltage protection Self-furbish	

输出特性 Output Features

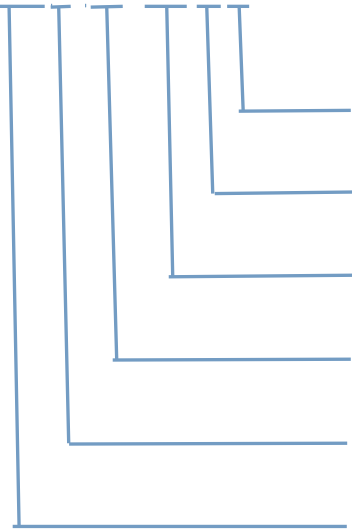
输出电压精度 Voltage tolerance	标称电压 Nominal voltage	±1% (3.3V、5V ±2%)
电压调整率 Line regulation (full load)	输入电压从低端到高端变化 Change of input voltage from lowend to highend	±0.5%
负载调整率 Load regul	20%~100%负载变化 20%~100% Load change	$V_O \leq \pm 0.5\%$
纹波噪声 Ripple&Noise	20M 带宽 20M Bandwidth	±1%
温度系数 Temperature coefficient		±0.02%/℃
过流保护 Output overcircuit Protection		115~150%额定电流, 自恢复 115~150%rated output circuit, auto recovery
短路保护 Short Circuit Protection		长期, 自恢复 Long-term, auto recovery
启动延迟时间 Turn-on delay time	典型值 Typical value	≤300mS
输出电压调节 Voltage adjust	标称输出电压 Nominal output	可调±10% Adjustable±10%
过冲幅度 Overshoot	25%额定负载变化 25% rated load change	≤500μ S
	$\Delta V_{O1} / V_{O1}$	±4.0%

一般特性 General Features

隔离耐压 Withstand voltage	输入对输出 I/P-O/P (1分钟, 漏电流 ≤5mA) (1Mintute ,leakage current) ≤5mA)	1500VDC
绝缘电阻 Isolation resistance	500V	≥100MΩ
MTBF	环境 25℃ Environment 25℃	2.0*10 ⁵ Hrs
开关频率 switching frequency		300KHz
最大壳温 The highest shell temperature	工作环境温度较高时, 需加装辅助散热措施, 确保模块表面温度低于 95℃ When working environment temperature is higher, need to add auxiliary colling measures, to ensure that the surface temperature below 95℃	+95℃
工作温度 Operating temperature	70℃以上降额使用 Above 75℃ derating make	-45℃~85℃
储存温度 Storage temperature		-45℃~105℃
工作相对湿度 Operating humidity	无凝露及结冰现象 (non condensing)	10%~90%RH
储存相对湿度 Storage humidity	无凝露及结冰现象 (non condensing)	5%~95%RH
冷却方式 Cooling method		自然冷却 Convection

命名方式 Naming Rules

JWDR 75-110S 5



输出电压
Output voltage
单路输出
Single Output
标称输入电压
Nominal Input voltage
输出功率
Output power
铁路机车系列
Railway locomotive series
DC/DC 电源模块
DC/DC power module

产品选型 Product selection

产品型号 Model No.	输入电压范围 Input voltage V_{in}	输出电压 Output voltage V_O	输出电流 Output current I_O	纹波噪声 R & N $V_{(P-P)mV}$	最大容性负载 Capacitive load maximum	效率 Efficiency
JWDR75-110S5	66~160V	5V	15.00A	50	7500uF	84%
JWDR75-110S12		12V	6.25A	100	6000uF	86%
JWDR75-110S15		15V	5.00A	100	4700uF	87%
JWDR75-110S24		24V	3.13A	120	3000uF	89%
JWDR75-72S5	45~135V	5	15.00A	50	7500uF	84%
JWDR75-72S12		12	6.25A	100	6000uF	86%
JWDR75-72S15		15	5.00A	100	4700uF	87%
JWDR75-72S24		24	3.13A	120	3000uF	89%

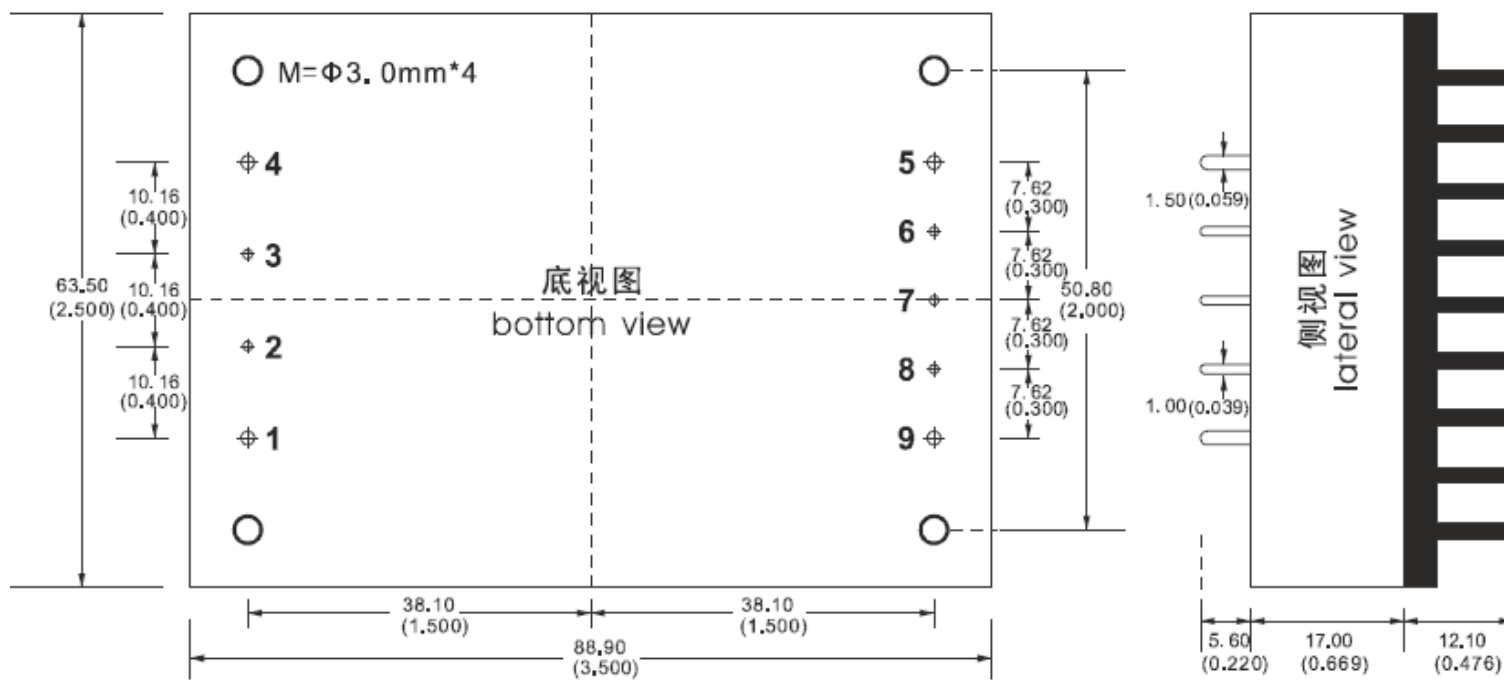
注：因篇幅有限，以上只是部分产品列表，若需列表以外产品，请与本公司销售部联系。

输出纹波噪声（峰-峰值）的测量，请参照模块测试说明中介绍的方法进行。

Note: Due to space limitations, the above list is only for some products, if other than a list of products, please contact the Company's sales department.

Output ripple noise measurement (peak - peak), please refer to the module test notes method is introduced.

封装尺寸图 Mechanical Data



注：1、4、5、9、管脚针为1.5mm, 其余为1mm

Note: 1, 4, 5, 9, pin Φ 1.5mm, others 1mm

管脚定义 Pin Assignments

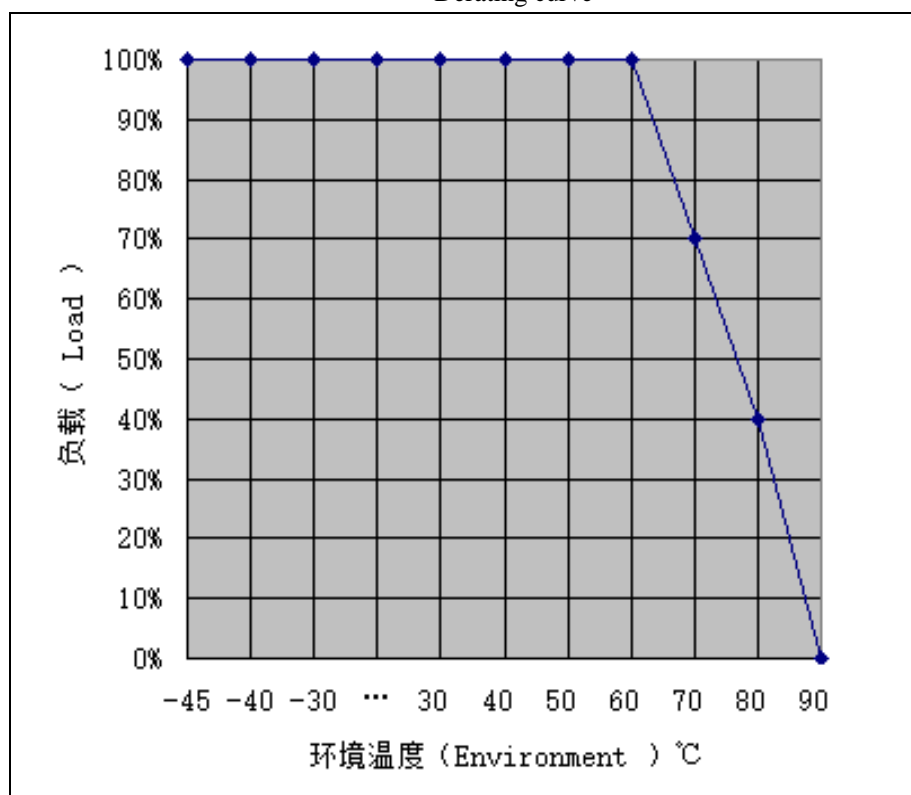
P1	P2	P3	P4	P5	P6	P7	P8	P9
Vin-	CNT	CASE	Vin+	Vout+	+S	TRIM	-S	GND

注：电源模块的外形尺寸和管脚定义如与选型手册不符，请以实物实际尺寸为准。

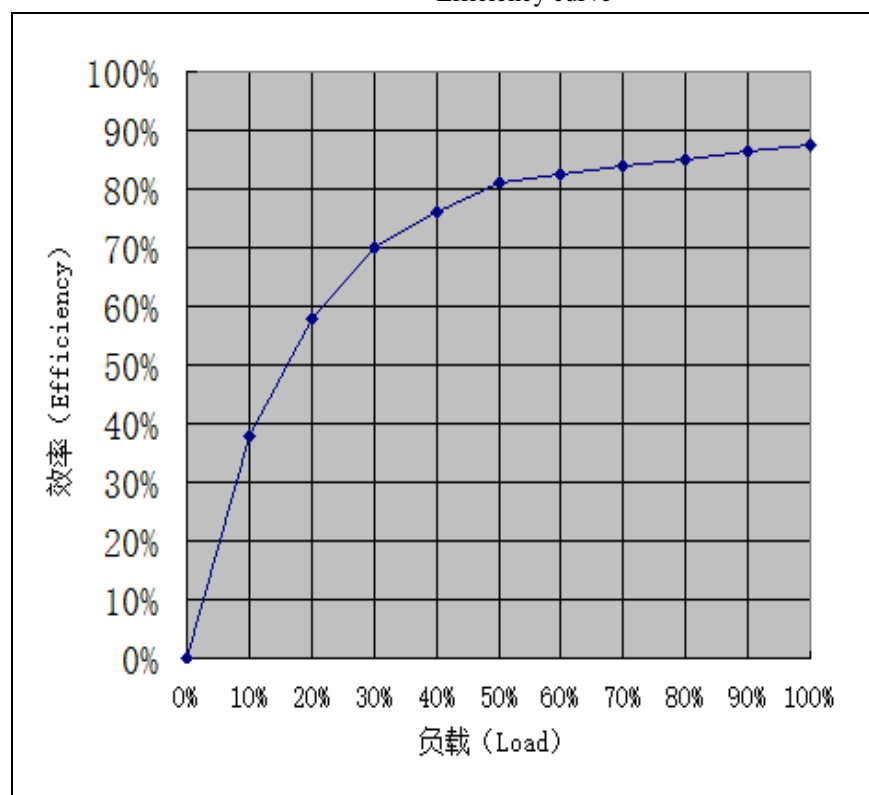
Note: Dimensions and pin Dfinitions of power module such as inconsistent with the hand book, please in kind prevail actual size

典型曲线 Typical curve

降额曲线
Derating curve



效率曲线
Efficiency curve



纹波噪声测试: (靠测法 20MHz)

测试方法: 纹波&噪声用示波器来测试。测试模块噪声时为了避免引入额外噪声, 须用示波器探头直接接触模块输出引脚

