- **1.5 WATTS REGULATED OUTPUT POWER**
- **LOW OUTPUT RIPPLE & NOISE**
- **PI TYPE INPUT FILTER**
- **500VDC ISOLATION VOLTAGE**
- **HIGH EFFICIENCY UP TO 55%**
- **STANDARD 24 PIN DIP PACKAGE & SMD TYPE PACKAGE**
- **FIVE-SIDED EMI SHIELD**

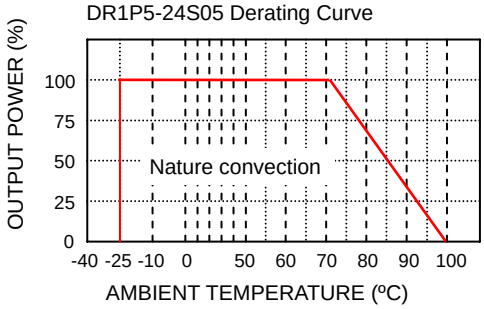
The DR1P5 series offer 1.5 watts of output power from a package in an IC compatible 24 pin DIP configuration without derating to 71ºC ambient temperature and pin to pin compatible to MKC03 series. DR1P5 series have input voltage of 4.5-5.5, 10.8-13.2 and 21.6-26.4VDC. DR1P5 features 500VDC of isolation voltage. A safety designed meet to EN60950-1 and UL60950-1. All models are particularly suited to telecommunications, industrial, mobile telecom and test equipment applications.

TECHNICAL SPECIFICATION

All specifications are typical at nominal input, full load and 25ºC otherwise noted

OUTPUT SPECIFICATIONS			
Output power			1.5 Watts max
Voltage accuracy	Full load and nominal Vin		± 4%
Minimum load			0%
Line regulation	LL to HL at Full Load		± 0.3%
Load regulation	25% to 100% FL	D05 output others	± 1.5% ± 0.5%
Cross regulation	Asymmetrical load 25% / 100% FL		± 5%
Ripple and noise	20MHz bandwidth		50mVp-p
Temperature coefficient			±0.02% / ºC, max
Short circuit protection			Short term

INPUT SPECIFICATIONS		
Input voltage range	5V nominal input	4.5 – 5.5VDC
	12V nominal input	10.8 – 13.2VDC
	24V nominal input	21.6 – 26.4VDC
Input filter		Pi type



GENERAL SPECIFICATIONS		
Efficiency		See table
Isolation voltage		500VDC, min
Isolation resistance		10^9 ohms, min
Isolation capacitance		30pF, max
Switching frequency		20KHz, min
Design meet safety standard		IEC60950-1, UL60950-1,EN60950-1
Case material		Nickel-coated copper
Base material		Non-conductive black plastic
Potting material		Epoxy (UL94-V0)
Dimensions		1.25 X 0.80 X 0.40 Inch (31.8 X 20.3 X 10.2 mm)
Weight	DIP SMD	16g (0.55oz) 18g (0.62oz)
MTBF (Note 1)		5.531 x 10^6 hrs

ENVIRONMENTAL SPECIFICATIONS		
Operating temperature range		-25ºC ~ +71ºC
Maximum case temperature		+100ºC
Storage temperature range		-55ºC ~ +105ºC
Thermal impedance	Nature convection	20ºC/watt
Thermal shock		MIL-STD-810D
Vibration		10~55Hz, 10G, 30minutes along X,Y and Z
Relative humidity		5% to 95% RH

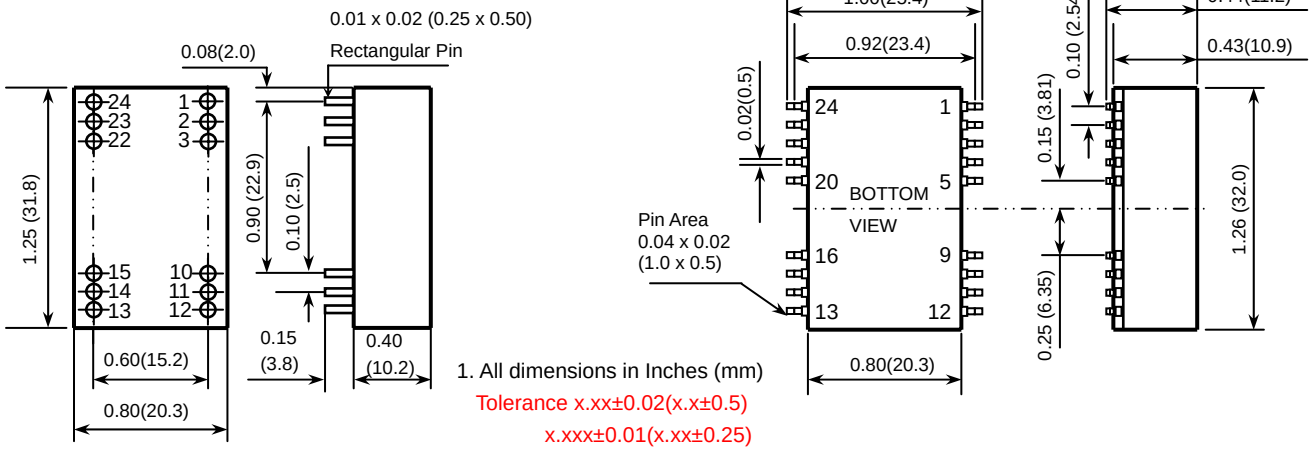
EMC CHARACTERISTICS		
Conducted emissions	EN55022	Class A
Radiated emissions	EN55022	Class A
ESD	EN61000-4-2	Perf. Criteria B
Radiated immunity	EN61000-4-3	Perf. Criteria A
Fast transient	EN61000-4-4	Perf. Criteria B
Surge	EN61000-4-5	Perf. Criteria B
Conducted immunity	EN61000-4-6	Perf. Criteria A

Model Number	Input Range	Output Voltage	Output Current	Input Current (2)	Eff (3) (%)	Capacitor Load max(4)
DR1P5-05S05	4.5 – 5.5 VDC	5 VDC	300mA	600mA	54	470uF
DR1P5-05S12	4.5 – 5.5 VDC	12 VDC	125mA	625mA	52	330uF
DR1P5-05S15	4.5 – 5.5 VDC	15 VDC	100mA	588mA	55	330uF
DR1P5-05D05	4.5 – 5.5 VDC	± 5 VDC	200mA/-100mA	682mA	48	330uF
DR1P5-05D12	4.5 – 5.5 VDC	± 12 VDC	± 60mA	613mA	51	110uF
DR1P5-05D15	4.5 – 5.5 VDC	± 15 VDC	± 50mA	600mA	54	110uF
DR1P5-12S05	10.8 – 13.2 VDC	5 VDC	300mA	245mA	55	470uF
DR1P5-12S12	10.8 – 13.2 VDC	12 VDC	125mA	260mA	52	330uF
DR1P5-12S15	10.8 – 13.2 VDC	15 VDC	100mA	245mA	55	330uF
DR1P5-12D05	10.8 – 13.2 VDC	± 5 VDC	200mA/-100mA	278mA	49	330uF
DR1P5-12D12	10.8 – 13.2 VDC	± 12 VDC	± 60mA	255mA	51	110uF
DR1P5-12D15	10.8 – 13.2 VDC	± 15 VDC	± 50mA	250mA	54	110uF
DR1P5-24S05	21.6 – 26.4 VDC	5 VDC	300mA	125mA	54	470uF
DR1P5-24S12	21.6 – 26.4 VDC	12 VDC	125mA	130mA	52	330uF
DR1P5-24S15	21.6 – 26.4 VDC	15 VDC	100mA	123mA	55	330uF
DR1P5-24D05	21.6 – 26.4 VDC	± 5 VDC	200mA/-100mA	142mA	48	330uF
DR1P5-24D12	21.6 – 26.4 VDC	± 12 VDC	± 60mA	128mA	51	110uF
DR1P5-24D15	21.6 – 26.4 VDC	± 15 VDC	± 50mA	125mA	54	110uF

Note

1. BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40ºC. (Ground fixed and controlled environment)
2. Maximum value at nominal input voltage and full load of standard type.
3. Typical value at nominal input voltage and full load.
4. Test by minimum Vin and constant resistive load.

Suffix-SMD



1. All dimensions in Inches (mm)
   Tolerance x.xx±0.02(x.x±0.5)
   x.xxx±0.01(x.xx±0.25)
2. Pin pitch tolerance ±0.014(0.35)

DIP PIN CONNECTION					
PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
1	+ INPUT	+ INPUT	24	+ INPUT	+ INPUT
2	NC	- OUTPUT	23	NC	- OUTPUT
3	NC	COMMON	22	NC	COMMON
10	-OUTPUT	COMMON	15	- OUTPUT	COMMON
11	+OUTPUT	+OUTPUT	14	+OUTPUT	+OUTPUT
12	- INPUT	- INPUT	13	- INPUT	- INPUT

SMD PIN CONNECTION					
PIN	SINGLE	DUAL	PIN	SINGLE	DUAL
1	+ INPUT	+ INPUT	24	+ INPUT	+ INPUT
2	NC	- OUTPUT	23	NC	- OUTPUT
3	NC	COMMON	22	NC	COMMON
10	-OUTPUT	COMMON	15	-OUTPUT	COMMON
11	+OUTPUT	+OUTPUT	14	+OUTPUT	+OUTPUT
12	- INPUT	- INPUT	13	- INPUT	- INPUT
Others	NC	NC	Others	NC	NC