

DRM40

EVALUATION DATA

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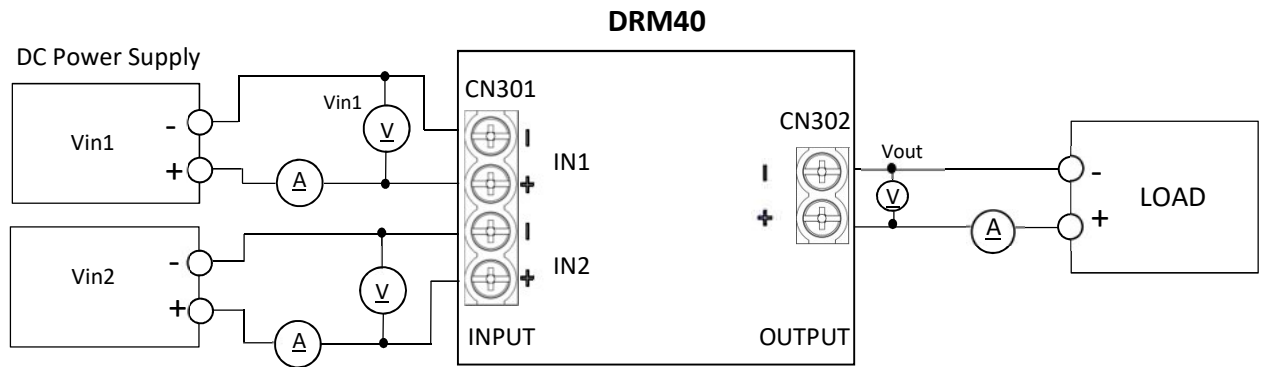
Terminology used

IN1	Input terminal 1
IN2	Input terminal 2
Vin	Input voltage
Vin1	.....	Input voltage 1
Vin2	.....	Input voltage 2
Vout	.....	Output voltage
Iin	.....	Input total current
Iin1	.....	Input current 1
Iin2	.....	Input current 2
Iout	.....	Output current
Ta	.....	Ambient Temperature

1. Evaluation Method

1.1 Circuit used for determination

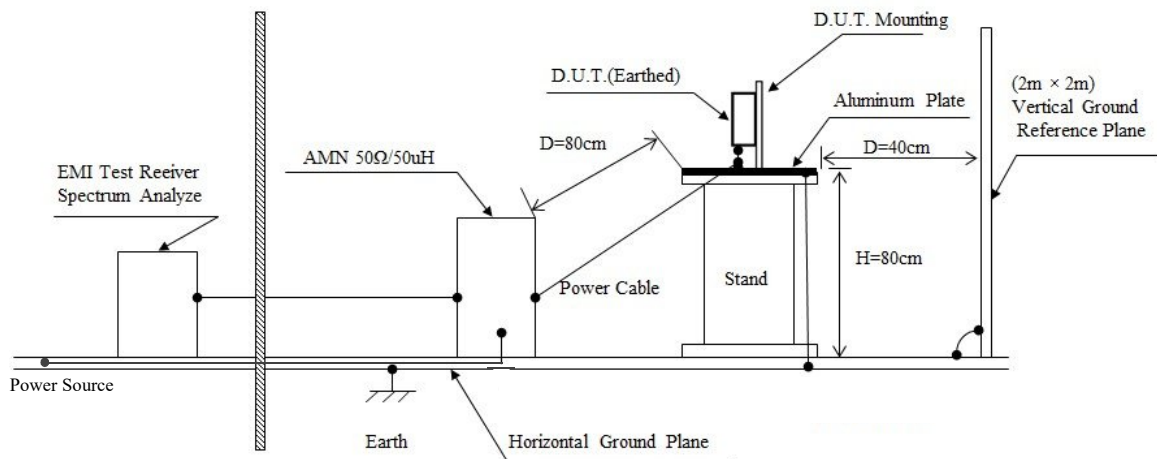
- Internal loss vs Output Current
- Internal loss vs Input Voltage
- Voltage drop ($V_{in}-V_{out}$) vs Output Current



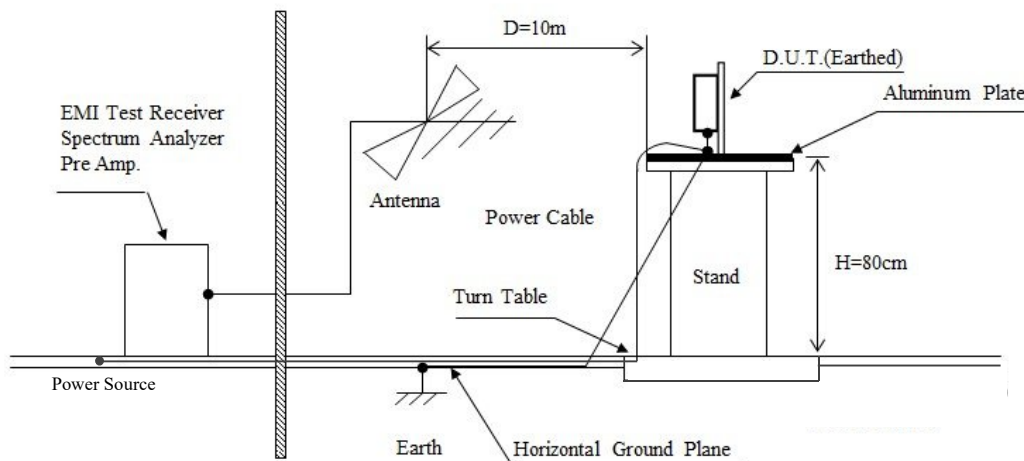
1.2 Configuration used for determination

Electromagnetic Interference

(a) Conducted Emission



(b) Radiated Emission



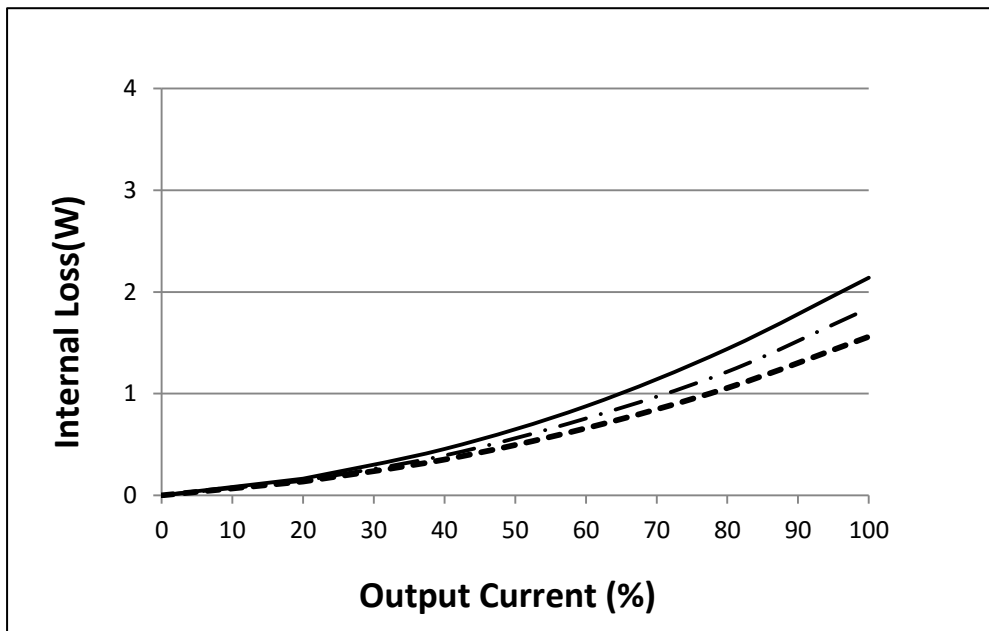
1.3 List of equipment used

	EQUIPMENT USED	MANUFACTURER	MODEL NO.
1	DIGITAL MULTIMETER	YOKOGAWA	TY710, TY720
2	DC ELECTRONIC LOAD	CHROMA	63206
3	DC POWER SUPPLY	TDK-LAMBDA	GEN5000W, GEN1500W
4	DIGITAL STORAGE	OSCILLOSCOPE YOKOGAWA	DL1740/DL1740E
5	DIGITAL POWER METER	HIOKI	3333
6	CURRENT PROBE/AMPLIFIER	YOKOGAWA	701931
7	DATA ACQUISITION UNIT	AGILENT	34970A
8	CONTROLLED TEMP. CHAMBER	ESPEC	SH-641
9	EMI TEST RECEIVER (CE-UL Lab)	ROHDE & SCHWARZ	ES17
10	LISN (CE-UL Lab)	SCHAFFNER LISN	NNB 41
11	LISN (CE-UL Lab)	EMCO LISN (AE)	3825/2
12	EMI TEST RECEIVER (RE-UL Lab)	ROHDE & SCHWARZ 100Hz- 26.5Ghz	ESU26
13	ANTENNA (BILOG) (RE-UL Lab)	TESEQ	CBL6112B
14	ANTENNA (HORN) (RE-UL Lab)	EMCO	3115
15	PRE AMP (RE-UL Lab)	HP	8447D
16	PRE AMP (RE-UL Lab)	TOYO	TPA0108-40

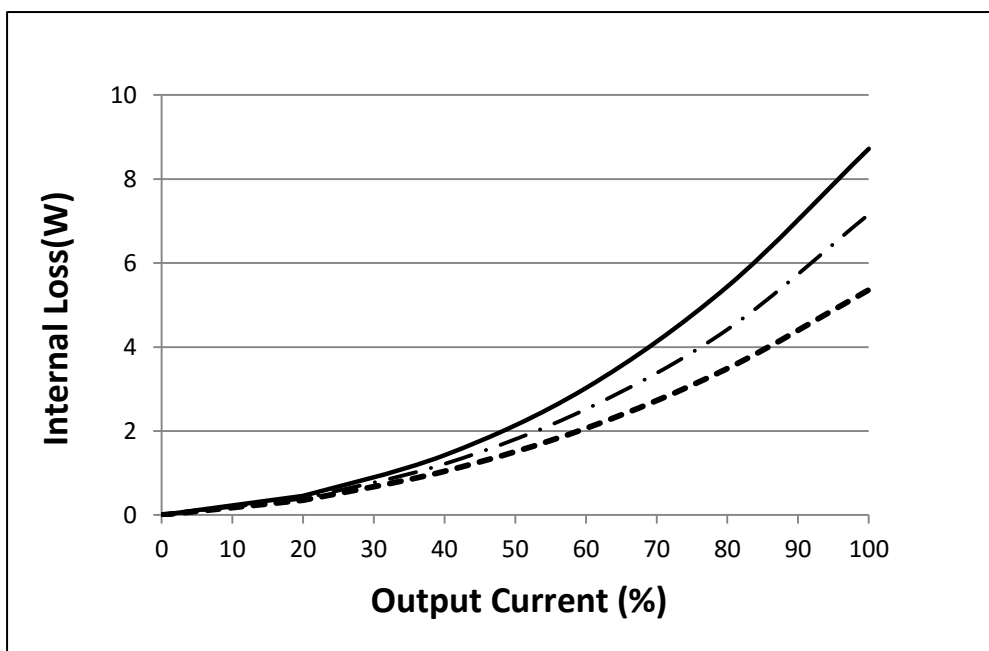
2. Characteristics

2.1 Internal loss vs Output Current Characteristics

Conditions Ta : 70°C ———
 25°C - · - · -
 -40°C - - - -
 Vin : 24VDC
 Iout : 20A (Iin1=Iin2=10A)

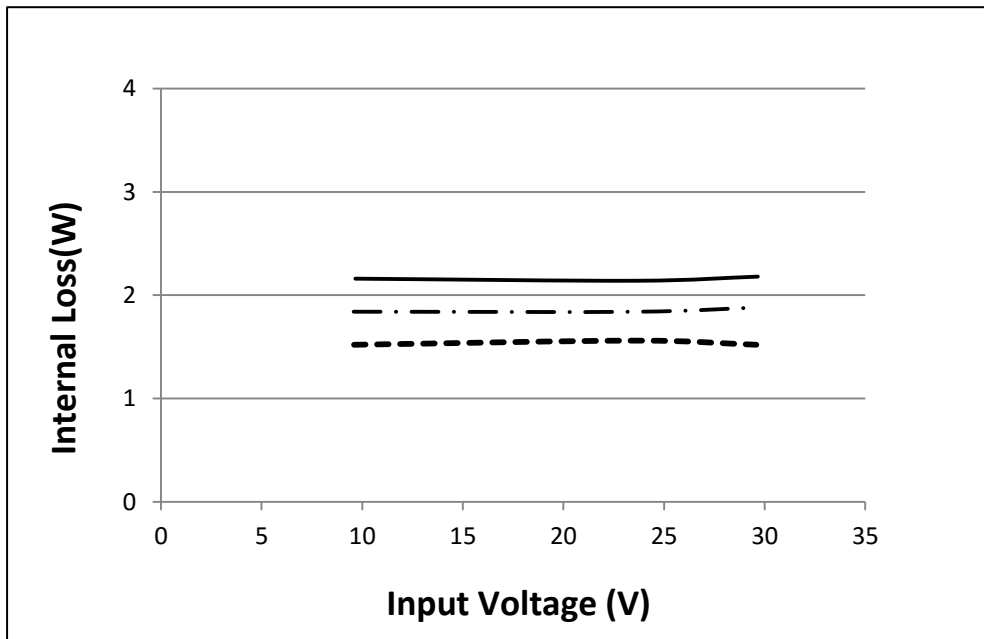


Conditions Ta : 70°C ———
 25°C - · - · -
 -40°C - - - -
 Vin : 24VDC
 Iout : 40A (Iin1=Iin2=20A)

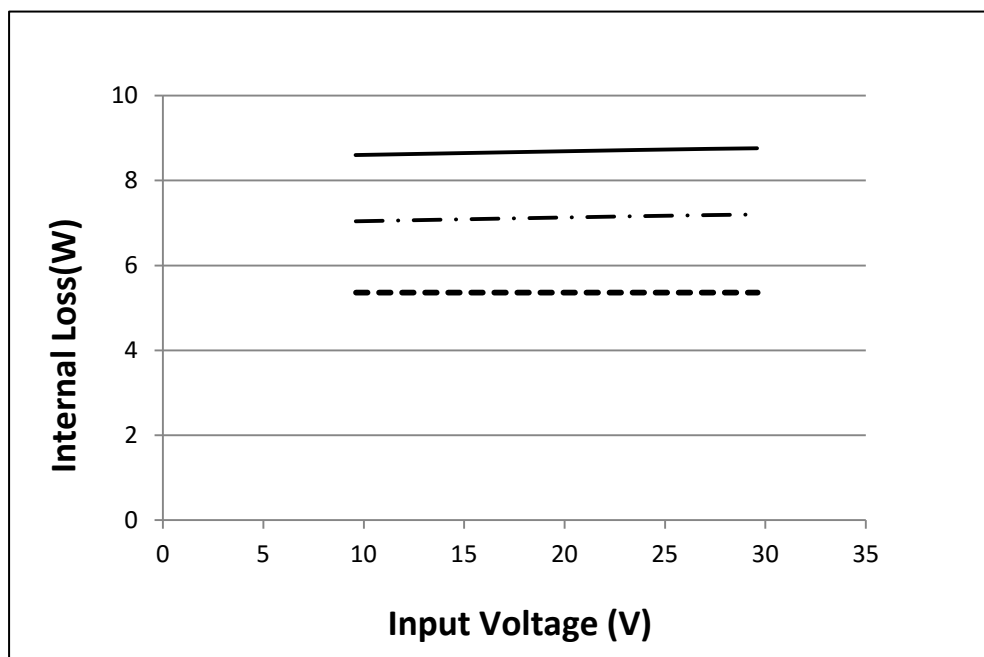


2.2 Internal loss vs Input Voltage Characteristics

Conditions Ta : 70°C ———
 25°C - · - · -
 -40°C - - - -
 Vin : 24VDC
 Iout : 20A (Iin1=Iin2=10A)

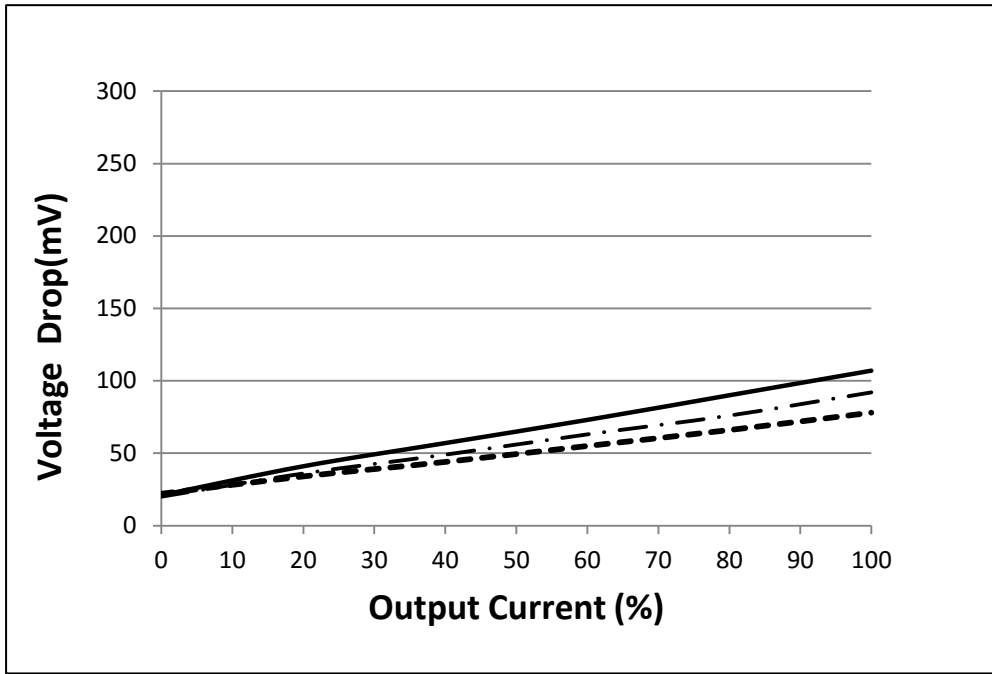


Conditions Ta : 70°C ———
 25°C - · - · -
 -40°C - - - -
 Vin : 24VDC
 Iout : 40A (Iin1=Iin2=20A)

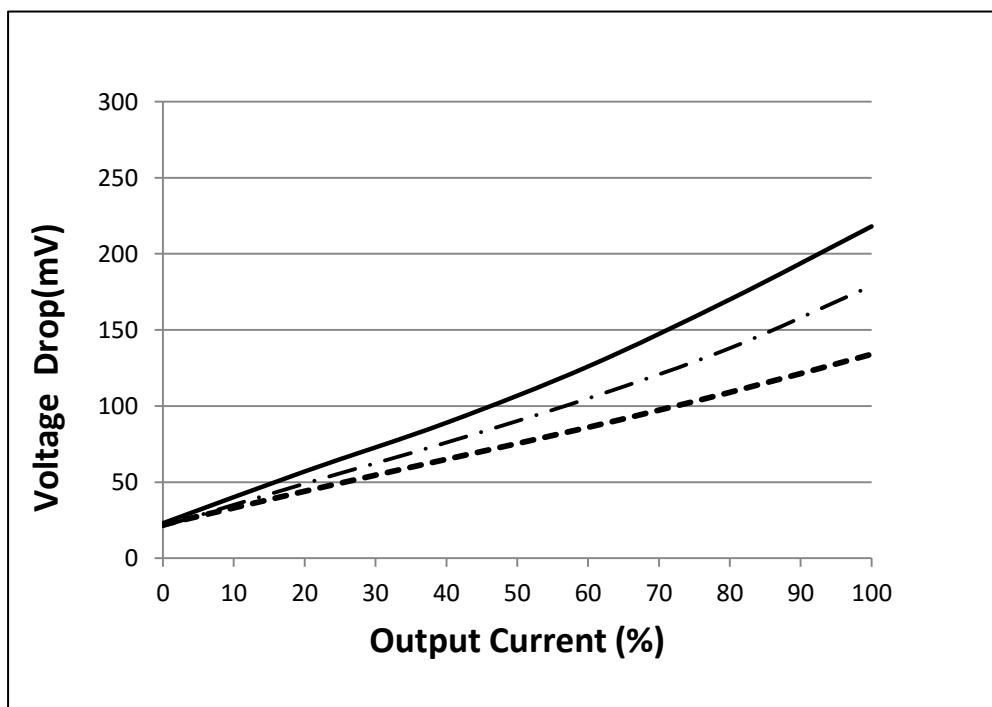


2.3 Voltage drop (Vin-Vout) vs Output Current Characteristics

Conditions Ta : 70°C ———
 25°C - · - · -
 -40°C - - - -
 Vin : 24VDC
 Iout : 20A (Iin1=Iin2=10A)



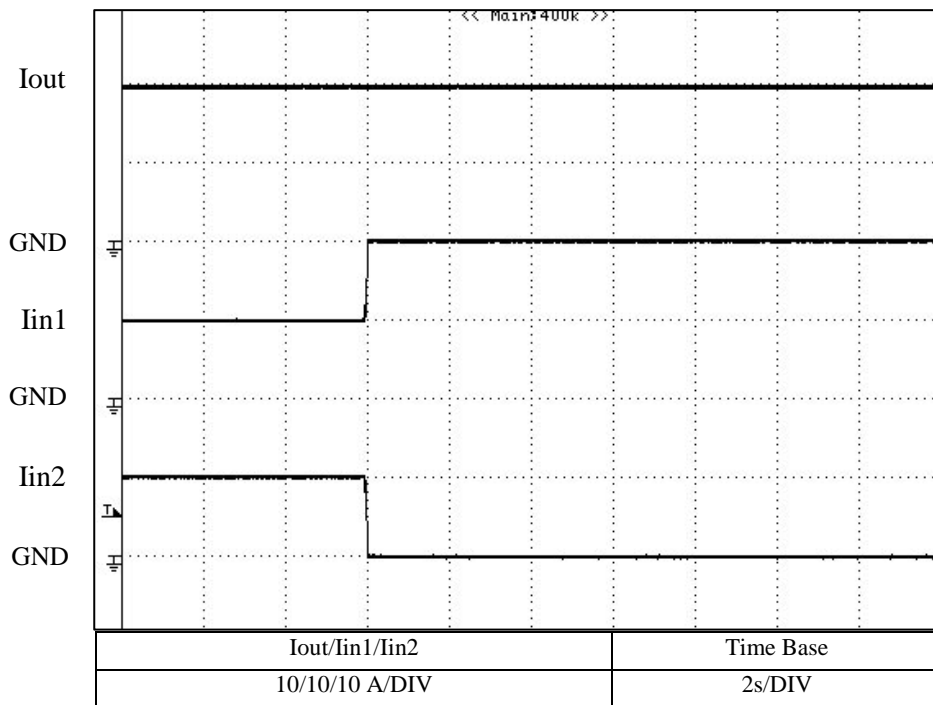
Conditions Ta : 70°C ———
 25°C - · - · -
 -40°C - - - -
 Vin : 24VDC
 Iout : 40A (Iin1=Iin2=20A)



2.4 Redundant Operation

Conditions Vin : 24VDC
 Ta : 25°C
 Iout : 20A (Iin1=Iin2=10A)

24VDC



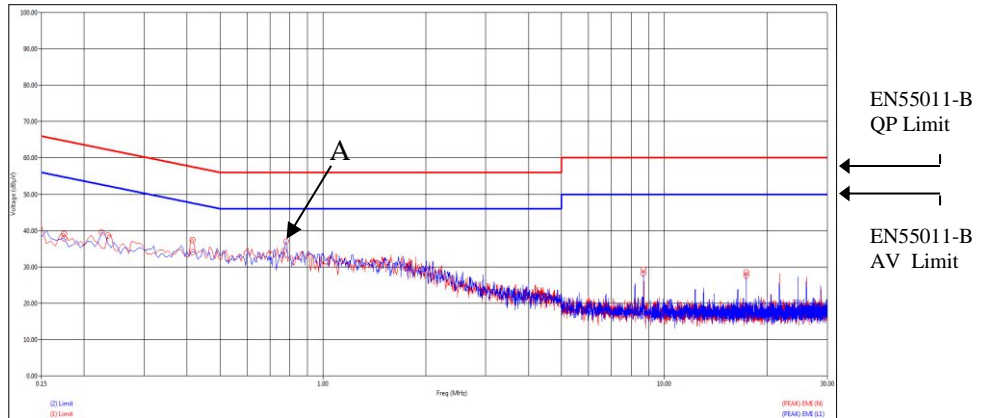
2.5 Electromagnetic Intference Characteristics

Conditions Vin : 24VDC
 Ta : 25°C
 Io : 40A
 Phase N : — (orange)
 Phase L : — (blue)

Conducted Emission

24VDC

Point A (0.77 MHz)		
Ref. Data	Limit (dBuV)	Measure (dBuV)
QP	56	29.32
AV	46	25.82



2.5 Electromagnetic Inteference Characteristics

Conditions Vin : 24VDC
 Ta : 25°C
 Io : 40A
 Horizontal : ———
 Vertical : ———

Radiated Emission

24VDC

Point B (59.4 MHz)		
Ref. Data	Limit (dBuV)	Measure (dBuV)
QP	40	6.84

