



MT3A- series

TECHNICAL SPECIFICATION All specifications are typical at nominal input, full load and 25°C otherwise noted

OUTPUT SPECIFICATIONS				
Output power		3 Watts, max.		
Voltage accuracy	Full load and nominal Vin		± 1%	
Minimum load (Note 5)			See table	
Line regulation	LL to HL at Full Load		± 0.2%	
Load regulation	Min Load to Full Load	Single	3.3Vout	± 0.3%
		Others		± 0.2%
		Dual		± 2%
Cross regulation (Dual) Asymmetrical load 25% / 100% FL				± 5%
Ripple and noise	20MHz bandwidth		See table	
Temperature coefficient				±0.02% / °C, max.
Transient response recovery time 25% load step change				500µS
Over load protection	% of FL at nominal input		180%, typ.	
Short circuit protection		Continuous, automatics recovery		
GENERAL SPECIFICATIONS				
Efficiency		See table		
Isolation voltage	Input to Output	500VDC ,min		
	Input (Output)to case	500VDC ,min		
Isolation resistance		10 ⁹ ohms, min.		
Isolation capacitance		300pF, max.		
Switching frequency		100KHz, 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)		
MTBF (Note 1)	BELLCORE TR-NWT-000332	3.706 x 10 ⁶ hrs		
	MIL-HDBK-217F	3.018 x 10 ⁶ hrs		

INPUT SPECIFICATIONS			
Input voltage range	5V nominal input	4.5 – 6VDC	
	12V nominal input	9 – 18VDC	
	24V nominal input	18 – 36VDC	
	48V nominal input	36 – 75VDC	
Input filter		Pi type	
Input surge voltage 100mS max	5V input	15VDC	
	12V input	36VDC	
	24V input	50VDC	
	48V input	100VDC	
Input reflected ripple current		Nominal Vin and full load	120mA _{p-p}
Start up time	Nominal Vin and constant resistive load		Power up 30mS, typ.
ENVIRONMENTAL SPECIFICATIONS			
Operating ambient temperature		-25°C ~ +85°C (with derating)	
Storage temperature range		-40°C ~ +125°C	
Maximum case temperature		100°C	
Thermal shock		MIL-STD-810F	
Vibration		MIL-STD-810F	
Relative humidity		5% to 95% RH	
EMC CHARACTERISTICS			
EMI	EN55022		Class A

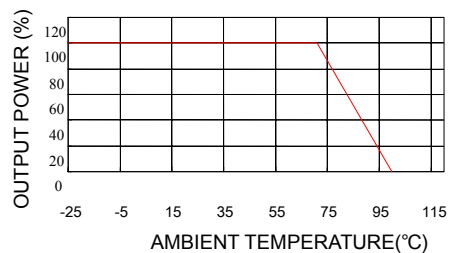
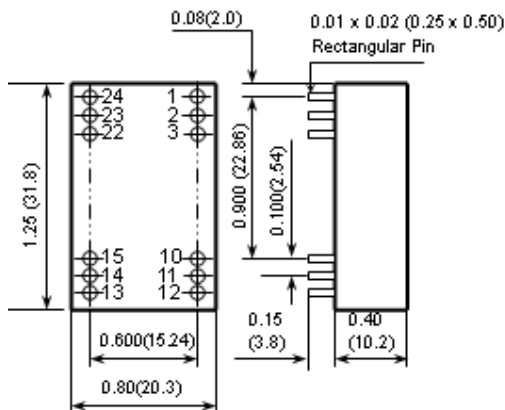
Note

- BELLCORE TR-NWT-000332. Case 1: 50% Stress, Temperature at 40°C.
MIL-HDBK-217F Notice2 @Ta=25 °C, Full load(Ground, Benign, controlled environment).
- Maximum value at nominal input voltage and full load.
- Typical value at nominal input voltage and full load.
- Test by minimum Vin and constant resistive load.
- The output requires a minimum loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.



Model Number	Input Range	Output Voltage	Output Current		Output ⁽³⁾ rrr Nipple&Noise	Input ⁽²⁾ Current	Eff ⁽³⁾ (%)	Capacitor ⁽⁴⁾ Load max
			Min. load	Full load				
MT3A-0533SI	4.5 – 6 VDC	3.3 VDC	60mA	600mA	75mVp-p	628mA	67	2200μF
MT3A-0505SI	4.5 – 6 VDC	5 VDC	60mA	600mA	75mVp-p	882mA	72	1000μF
MT3A-0512SI	4.5 – 6 VDC	12 VDC	25mA	250mA	120mVp-p	869mA	73	170μF
MT3A-0512WI	4.5 – 6 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	869mA	73	± 96μF
MT3A-0515WI	4.5 – 6 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	882mA	72	± 47μF
MT3A-1233SI	9 – 18 VDC	3.3 VDC	60mA	600mA	75mVp-p	257mA	68	2200μF
MT3A-1205SI	9 – 18 VDC	5 VDC	60mA	600mA	75mVp-p	362mA	73	1000μF
MT3A-1212SI	9 – 18 VDC	12 VDC	25mA	250mA	120mVp-p	342mA	77	170μF
MT3A-1212WI	9 – 18 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	342mA	77	± 96μF
MT3A-1215WI	9 – 18 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	342mA	77	± 47μF
MT3A-2433SI	18 – 36 VDC	3.3 VDC	60mA	600mA	75mVp-p	128mA	68	2200μF
MT3A-2405SI	18 – 36 VDC	5 VDC	60mA	600mA	75mVp-p	178mA	74	1000μF
MT3A-2412SI	18 – 36VDC	12 VDC	25mA	250mA	120mVp-p	171mA	77	170μF
MT3A-2412WI	18 – 36 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	171mA	77	± 96μF
MT3A-2415WI	18 – 36 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	171mA	77	± 47μF
MT3A-4833SI	36 – 75 VDC	3.3 VDC	60mA	600mA	75mVp-p	63mA	70	2200μF
MT3A-4805SI	36 – 75 VDC	5 VDC	60mA	600mA	75mVp-p	91mA	73	1000μF
MT3A-4812SI	36 – 75 VDC	12 VDC	25mA	250mA	120mVp-p	86mA	77	170μF
MT3A-4812WI	36 – 75 VDC	± 12 VDC	±12mA	± 125mA	120mVp-p	86mA	77	± 96μF
MT3A-4815WI	36 – 75 VDC	± 15 VDC	±10mA	± 100mA	150mVp-p	87mA	76	± 47μF

MT3A-4805SI



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