ARTESYN TECHNOLOGIES

SWG10 SERIES

DC/AC single output ring generator



- **Provides 10VA of ringer output power**
- **Output voltage may be adjusted from 0V rms to 80V rms**
- **Amplifies a reference frequency between 15-60Hz**
- **Meets psophometrically weighted noise per BTR2511**
- **Conducted emissions performance meets EN55022 level A**
- **High efficiency 4 quadrant switch mode design**
- **Low profile suitable for rack mount system**

Defined to provide modular and on-card ring generator facilities to telecoms systems, the SWG10 offers a definable output voltage 0VAC to 80VAC at up to 10VA with the frequency being custom defined for the applications. Undervoltage lockout and overvoltage protection combine with a high MTBF to ensure reliable operation. The SWG10 is suited to several telecom applications including PABX, public switch and fibre-in-the-loop.

[2 YEAR WARRANTY]

SPECIFICATION

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATIONS		
Nominal voltage	(See Note 8)	70V rms
Voltage accuracy		±3.0%
Output frequency	Depends on reference sinewave (See Note 1)	15 to 60Hz
Max. output current	(See Note 7)	100mA rms
Peak output current	150ms max.	400mA peak (AC+DC)
Static load regulation	No load to full load	2.5%
Output ripple	Full load	2V pk-pk, typical
Output ripple frequency	Full load	280kHz, nominal
Total harmonic distortion		5%, max.
Overvoltage protection	Transient clamp	133-193V pk-pk
Short circuit protection		Not protected
Voltage range adjust	(See Note 3)	0V rms to 80V rms
Output fuse (See Note 6)		250V @ 250mA, slow blow
DC offset		<±6V
INPUT SPECIFICATIONS		
Input voltage range	48VDC nominal	36 to 72VDC
Input current	235mA nominal	180 to 280mA
Inrush current	Switch 48V	4A peak pulses at 4ms intervals
Input undervoltage	Lockout threshold	25 to 32VDC
Input fuse (See Note 6)		Rated to 250V @ 500mA Slow blow to allow 4A for 3ms
Reference input impedance		30kΩ

INPUT SPECIFICATIONS CONTINUED		
Remote ON/OFF		(See Note 4)
Logic compatibility		TTL open collector
Enable output		Open circuit
Disable output		0.4VDC, max.
Remote pin return		Reference to -Vin
INPUT NOISE SPECIFICATIONS		
Voiceband	Psophometrically weighted 25Hz to 5kHz per BTR2511	2mV rms
Wideband	5kHz to 20MHz per BTR2511	20mV rms
Narrowband	per BTR2511	72dBµV
Conducted	150kHz to 30MHz	FCC, EN55022-A
GENERAL SPECIFICATIONS		
Efficiency (See Note 2)	650Ω load	65%
Isolation voltage	3 terminal	0V
Switching frequency	Fixed	140kHz, nominal
Case material		Plastic
Material flammability		UL94V-0
Weight		130g (4.6oz)
MTBF	MIL-HDBK-217F	300,000 Hours
ENVIRONMENTAL SPECIFICATIONS		
Thermal performance	Operating, no derating (See Note 5)	–25°C to +71°C
	Non-operating	–55°C to +105°C
Cooling		(See Note 5)

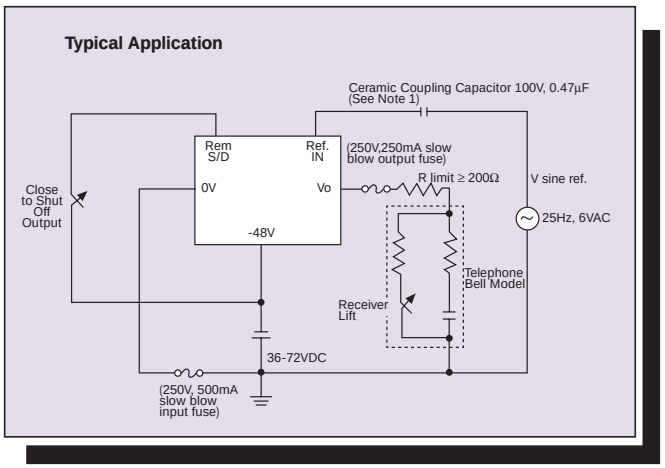
10VA
DC/AC ring generator

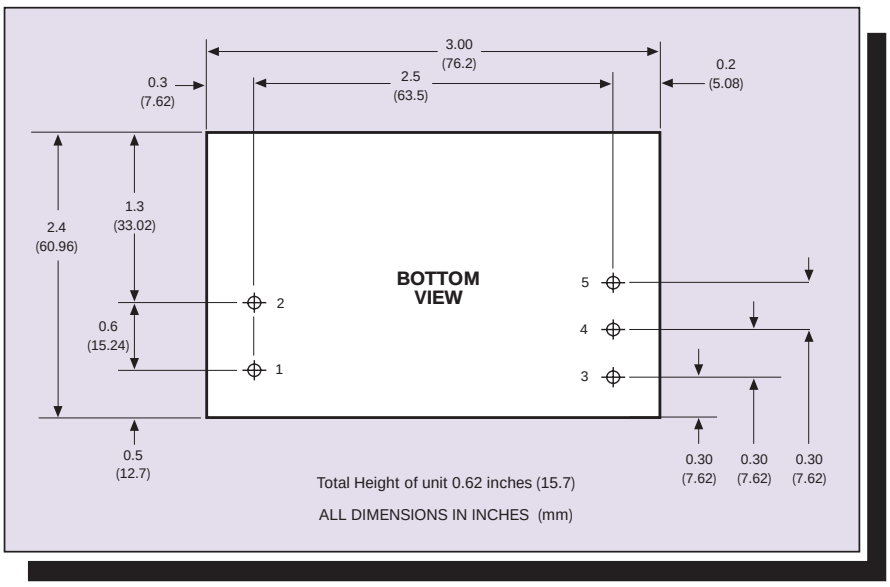
INPUT VOLTAGE	OUTPUT VOLTAGE RANGE (8)	OUTPUT FREQUENCY	OUTPUT CURRENT (7)	TYPICAL EFFICIENCY (2)	MODEL NUMBER
36-72VDC	0V rms to 80V rms	15Hz to 60Hz	100mA	65%	SWG10-48S70C04

Notes

1 Sine wave reference: The SWG10 can amplify any sinusoidal reference signal with a frequency between 15Hz and 60Hz. Thus standard telecom ringer frequencies, such as 15Hz, 25Hz and 50Hz can be easily output. A sinewave reference needs to be coupled to the unit with a single 0.1µF to 1µF (100V) capacitor.
2 Efficiency measured with resistive load,
3 Output voltage range adjust: the output voltage is proportional to the reference sinewave at Ref-In pin (after external coupling capacitor). The ringer has a voltage gain of 30.8 (typ.).
4 Remote ON/OFF: The remote shutdown operates on. Open collector sink of 1mA to shut off.
5 The operating temperature range assumes that sufficient airflow exists to ensure the case/encapsulation temperature never exceeds +85°C. At any power up, the case temperature should not exceed +70°C.
6 The input and output fuses are essential because there is no internal short circuit or overcurrent protection circuitry.
7 System design should ensure that multiple 'receiver lifts' (modems, faxes, answering machines) do not occur simultaneously to cause peak output current to exceed the 400mA, 150ms maximum.
8 System design should ensure that 'Sine Wave Reference' pin 2 is set such that Vout never exceeds 80V.

PIN CONNECTIONS	
PIN NUMBER	SINGLE OUTPUT
1	Remote ON/OFF
2	Sine Wave Reference
3	+ Input, + Output Return
4	- Input
5	– Output





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