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BLACK MAGIC TELEPHONE RINGING GENERATOR -- MICRO SQUARE WAVE MODEL UU-BMR

=====OPERATING CHARACTERISTICS=====

Specification		----Value----		Remark
Input voltage	(V_{dc})	5	12	5 V unit operate: 4.4-6 V 12 V unit operate: 11-14 V Custom voltages 3-15 available on special order
Idle current	(mA)	~160	~85	
Output voltage	(V_{rms})	-----86-----		Custom voltages available on special order
Output power	(W)	5	5	Intermittent duty
Output frequency	(Hz)	---20±0.5---		Custom frequencies available on special order
Load regulation	(%)	-----±15-----		
Efficiency	(%)	--60 to 80--		Depending on V_{in} and R_{load}
Operating temp.	(° C)	-10-->+70		Wider temperature range available on special order
Storage temp.	(° C)	-10-->+85		
Hi-pot test	(600 V_{ac})	Input-->output		

=====NOTES=====

- (1) Part numbering system: UUvvVVFF where vv is input voltage; VV is rms output voltage; FF is output frequency.
- (2) L-form output filter may be employed to shape square wave with any desired cut-off frequency. Refer to CEL's publication *Telecom Design Tricks* and Datasheet "Appropriate Wave-Shaping Filters for Micro and Mini Black Magic Telephone Ringing Generators".
- (3) Erratic ring trip may sometimes occur with d.c. bias of 24 V or less. If so, reversing the physical phasing of output pins with respect to d.c. bias may cure mis-operation.
- (4) Output IS NOT PROTECTED against short circuits; must be series resistance of at least 300 Ω in circuit, normally part of ring-trip circuit. If the ring-trip current sensing resistor is less than 300 Ω , additional resistance must be added. Output is protected against transient overvoltages by internal zener clamp. May require conditioning for highly inductive loads.
- (5) Output will pass d.c. ring-trip bias only when unit is powered.
- (6) Input is NOT PROTECTED AGAINST REVERSE POLARITY.

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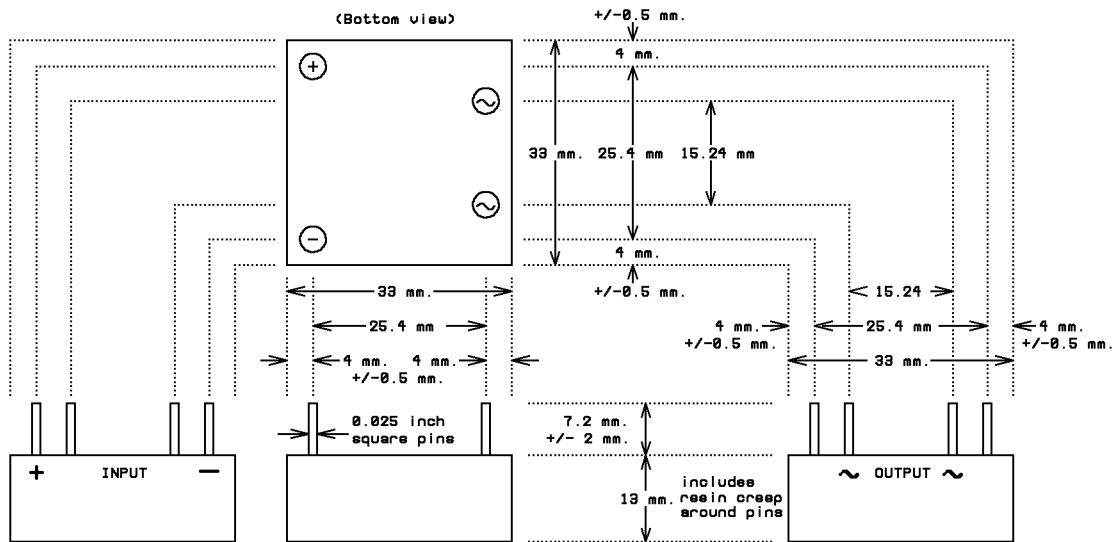
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 PHYSICAL CHARACTERISTICS AND MECHANICAL SPECIFICATIONS

=====PHYSICAL CHARACTERISTICS=====

Dimensions mm (in)

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Dimensions		Terminal spacing	
Height	12.7 (0.50)	Output	15.24 (0.6)
Width	33.0 (1.30)	Input	25.40 (1.0)
Length	33.0 (1.30)	=====	
=====		Weight:	28 grams (1.0 oz)

=====MECHANICAL SPECIFICATIONS=====



/DI-UBMR.PIX

=====CONSTRUCTION AND MOUNTING=====

Black Magic Micro square-wave ringing generators are monolithically encapsulated in water-proof epoxy UL-rated 94V-0 with terminals as 0.025 inch square pins. Units are intended for direct solder-down to pcb or they may be socketed with receptacles e.g. any receptacle using Mill-Max clips #16 or #47.