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Microsemi Introduces März 2007

- **Higher Power, High Gain, Medium Pulse Transistor for S-Band Radar.**
- **High Power Mode-S ELM Pulse Transistor for Avionics Applications.**
- **First One-Kilowatt Power Transistor for Mission-Critical Radar Applications as weather and over-the-horizon radar.**
- **VRF Product Strategy: Family of "direct drop-in" replacements to M/A-Com and ST.**


Microsemi Introduces Higher Power, High Gain, Medium Pulse Transistor for S-Band Radar

Microsemi Corporation has announced the addition of a new high power, high gain medium pulse transistor to its line of products for S-Band radar applications.

-- 250us pulse width, 10% duty cycle
-- 100 Watts Peak Power
-- 8.0 dB Power Gain Flatness

Designated the 2731-100M, the latest transistor from Microsemi's new RF Power Products Division is a high performance, common base, class C, output stage offering unparalleled performance of 100W of peak power, 40% collector efficiency, excellent 8.0 dB power gain flatness, and a hermetically-sealed high reliability package for Air Traffic Control and Military Radar applications.

The 2731-100M utilizes a new chip design and processing enhancements to offer state-of-the-art performance, notably in high power and high gain over the 2.7 to 3.1 GHz frequency range, with a 250us pulse width and 10% duty cycle. Other features include a VSWR 2:1 load mismatch and a Vcc of +36V.

"This is a significant step for our overall product development and marketing strategy," said Jerry Chang, Director of Radar and RF Module Business. "We are extremely pleased to add this top-notched S-Band product to our UHF, P-Band, L-Band, and S-Band Radar Product Family," Chang said.

"This is a leading edge S-Band product designed to strengthen our position in that segment of the Radar Market. It demonstrates again the commitment we have to serve our valued radar customers with strong custom design and development capabilities, excellent technical and product support, and the ability to deliver high volume transistors having the best repeatability and consistency in the industry," Chang added.

Microsemi Introduces High Power Mode-S ELM Pulse Transistor for Avionics Applications

Microsemi has announced a new high power Mode-S, extended length messaging (ELM) transistor designed for avionics applications.

-- 1030/1090 MHz
-- 500 Watts Output Power
-- Mode-S ELM Pulsing: 32uSec ON/18uSec OFF x 48 repeated at 23mSec

Designated the MDS 500L, the new pulsed power transistor was designed at Microsemi's new RF Power Products division to provide 500 watts output power with a high 55% collector efficiency and a 3:1 load mismatch tolerance for Mode-S applications in the 1030/1090 MHz frequency range. Pulsing is rated at 32uSec ON/18uSec OFF x 48 repeated at 23mSec.

Its state-of-the art performance is based on a new bipolar silicon chip design that also provides a maximum fast rise time of 80 nanoseconds and Vcc is 50 Volts. Hermetic metal packaging supports high reliability avionics applications.

"We are very pleased to offer this high performance product to fill the need for a more robust transistor for ELM applications -- demonstrating again our commitment to providing the defense and aerospace community with leading edge solutions," said Jim Zazkowski, Manager of Avionics, Communications and EW Products.

Microsemi Introduces Industry’s First One-Kilowatt Power Transistor for Mission-Critical Radar Applications as weather and over-the-horizon radar

IRVINE, Calif., has introduced the industry’s highest power UHF transistor for weather and over-the-horizon radar applications, doubling the power of prior solutions.

Designated the 0405-1000M, the new transistor provides one kilowatt of power to replace two 500-watt devices that previouslywere the highest available for these mission-critical UHF applications operating at 400-450 MHz, with no compromise in RFperformance.

Charles Leader, Vice President of Microsemi’s Power Products RF Division noted that Microsemi’s Power Products Group continues to push the state-of-the-art in silicon bipolar, LDMOS and VDMOS transistor technologies -- as demonstrated by this new one kilowatt device -- while aggressively investing in Wide Band Gap technology for future leading edge applications.

The 0405-1000M transistor is designed for high performance, with a common emitter, class C, output stage offering unparalleled performance of 1000W of peak power and 70% collector efficiency at 450MHz. It employs a hermetically-sealed package for highest reliability in weather and over-the-horizon radar applications.

This latest Microsemi transistor utilizes a new chip design and processing enhancements to offer state-of-the-art performance, notably in high power and high gain over the specified frequency range with 300us pulse width and 10% duty cycle.

0405-100M Key Product Features:
• Designed for UHF Radar Application: 400 – 450 MHz
• Medium Pulse Format: 300 us, 10%
• Excellent Output Power : 1000W
• High Power Gain: 10 dB
• Collector Efficiency: 70 % @450MHz
• Compression: In Compression
• Vcc: +40V

The 0405-100M is available for immediate evaluation.

VRF Product Strategy: Family of "direct drop-in" replacements to M/A-Com and ST

Pout (W)	Freq (MHz)	V_{DD}/BV_{DSS} (V)	Package Style	Part Number	Configuration
150	150	50/150	0.5" SOE	VRF150	Single
150	175	50/150	0.5" SOE	VRF151	Single
300	175	50/150	Gemini	VRF151G	2, VRF151 in Push-Pull
300	150	50/150	0.625" SOE	VRF2933	2, VRF151 in Parallel
600	30	50/150	T2	VRF154FL	4xVRF150 in Parallel
600	30	50/150	T2	VRF157FL	4xVRF151 in Parallel
30	175	50/150	0.38" SOE	VRF148	Single
150	175	28/75	0.5" SOE	VRF141	Single
300	175	28/75	Gemini	VRF141G	2, VRF141 in Push-Pull
300	175	28/75	T4	VRF141FL	2, VRF141 in Push-Pull

Black = Introduction in 2006
Blue = In Development for 2007 introduction

Weitere Infos:

PROTEC GmbH
Vertrieb elektronischer Bauteile
Laurinweg 1 - 85521 Ottobrunn bei München
Telefon: 089-6 60 29 23 - Fax: 089-6 09 8170
sales@protec-semi.de - www.protec-semi.de
Ansprechpartner: Hermann Lindbüchl