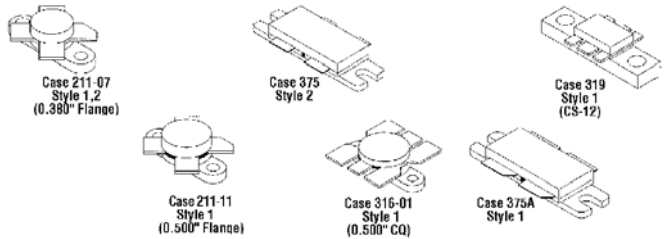




RF Discrete Transistors and Pressure Sensors

RF Discrete Transistors



RF Power MOSFETs

To 225 MHz VHF AM/FM; V<sub>DS</sub> = 28 Volts, Class AB  
For VHF military and commercial aircraft radio transmitters.

Mfr.'s Type	P <sub>out</sub> Output Power Watts	P <sub>in</sub> Input Power Watts	G <sub>re</sub> (Typ.)/Freq. dB/MHz	η Eff. % Typ.	θJC °C/W	Package/Style
MRF136	15	0.38	16.0/150	60	3.20	211-07/2
MRF173	80	4.00	13.0/150	65	0.80	211-07/2
MRF141G	300	30.00	10.0/175	55	0.35	375/2

To 500 MHz VHF/UHF AM/FM; V<sub>DS</sub> = 28 Volts, Class AB  
For VHF/UHF military and commercial aircraft radio transmitters.

MRF166C	20	0.40	17.0/400	55	2.50	319/1
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RF Power Bipolar Transistors — HF

14-30 MHz, CB Amateur Band; V<sub>CC</sub> = 12.5 or 13.6 Volts, Class AB  
For economical, high-volume use in CW, AM and SSB applications.

Mfr.'s Type	P <sub>out</sub> Output Power Watts	P <sub>in</sub> (Max.) Input Power Watts	G <sub>re</sub> (Min.) Gain @ 30 MHz dB	θJC °C/W	Package/Style
MRF455	60	3.00	13	1.0	211-07/1
MRF454	80	5.00	12	0.7	211-11/1

RF Power Bipolar Transistors — VHF

136-174 MHz High Band; V<sub>CC</sub> = 12.5 Volts, Class C  
For VHF FM high-band.

Mfr.'s Type	P <sub>out</sub> Output Power Watts	P <sub>in</sub> (Max.) Input Power Watts	G <sub>re</sub> (Min.) Gain @ 175 MHz dB	θJC °C/W	Package/Style
MRF247*	75	15.00	7	0.7	316-01/1

\*Internal impedance matched.

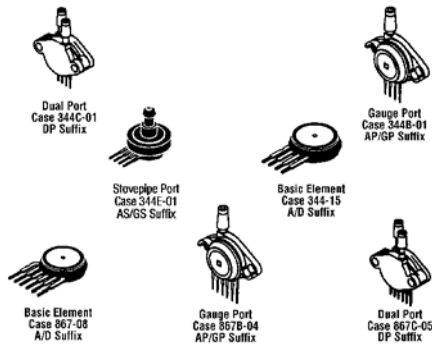
RF Power Bipolar Transistors — 900 MHz

870-960 MHz Band; V<sub>CC</sub> = 26 Volts, Si Bipolar  
For 900 MHz mobile radio band. Devices are listed for mobile and base station applications.

Mfr.'s Type	P <sub>out</sub> Output Power Watts	Class	P <sub>in</sub> (Max.) Input Power Watts	G <sub>re</sub> (Min.)/Freq. Power Gain dB/MHz	θJC °C/W	Package/Style
MRF899*	150	AB	24	8.0/900	0.8	375A/1

\*Internal impedance matched.

MPX Pressure Sensors



Motorola's sensor family provides a diverse portfolio of silicon MEMS pressure sensors with features that include high reliability, uncompromising accuracy and performance consistency, excellent manufacturing repeatability and system design versatility. By combining Motorola's SENSEON® sensors with our other SPS semiconductor products, you have the advantage of creating a value-added, total system design that carries Motorola's commitment to the highest quality, reliable delivery and consistent long-term performance.

Frequently Asked Questions

- Q. What is the advantage of silicon micromachined sensors over mechanical sensing technology?  
A. Combined with Motorola's advanced silicon batch processing and micromachining technology, silicon based transducers offer high repeatability, accuracy and dependability over time at a very competitive price.  
Q. Are Senseon sensors compatible with various types of media such as water or oils?  
A. Motorola SENSEON pressure sensors have been used in applications such as washing machine water level, automotive fuel level and manifold absolute pressure measurements. By using appropriate media isolation techniques, our pressure sensors can be made compatible with a variety of media.

Hot-New Application Notes

- AN1556 Designing Sensor Performance Specifications for MCU-based Systems  
AN1557 A Cookbook Approach to Designing a Differential-Signal Amplifier for Sensor Applications  
AN1571 Digital Blood Pressure Meter  
AN1573 Understanding Pressure and Pressure Measurement  
AN1583 Motorola's Next Generation Piston Fit Pressure Sensor Packages  
AN1620 A Monolithic Integrated Solution for MAP Applications  
AN1621 An Integrated Silicon Bulk Micromachined Barometric Pressure Sensor Control Unit and External Mount  
AN1622 EMC Considerations for Automotive Sensors

Visit the Sensors web site at: <http://sps.motorola.com/senseon>

MPX10/50/100/200 Series (Uncompensated)

Mfr.'s Type	Pressure Range (PSI)	Device Type	Measurement Type	Package Type	Positive Pressure Side Identifier	Pressure Range (kPa/PSI) Max.	Over Pressure (kPa)	Offset (mV) Typ.	Full Scale Span (mV) Typ.	Sensitivity (mV/kPa) Typ.	Linearity % of FSS*		Temperature Coefficient of Span (%/°C) Typ.	Input Impedance (Ω) Typ.
											Min.	Max.		
MPX10DP	0-1.45	4-Pin Ported Element	Differential Port	Case 344C-01	Side With Part Marking	10/1.45	75	20.00	35	3.5	-1.00	1.00	-0.19	475
MPX10GP	0-1.50	4-Pin Ported Element	Gauge	Case 344B-01	Side With Port Attached	10/45.00	100	20.00	35	3.5	-1.00	1.00	-0.19	475

MPX2000/2100/2200 Series (Temperature Compensated and Calibrated On-Chip)

MPX2010DP	0-1.50	4-Pin Ported Element	Differential Port	Case 344C-01	Side With Part Marking	10/1.45	75	±0.05	25	2.5	-1.00	1.00	±0.50	1800
MPX2010GP	0-1.50	4-Pin Ported Element	Gauge	Case 344B-01	Side With Port Attached	10/1.45	75	±0.05	25	2.5	-1.00	1.00	±0.50	1800
MPX2010GS	0-1.50	4-Pin Ported Element	Gauge Stovepipe	Case 344E-01	Stainless Steel Cap	10/1.45	75	±0.05	25	2.5	-1.00	1.00	±0.50	1800
MPX2050DP	0-7.30	4-Pin Ported Element	Differential Port	Case 344C-01	Side With Part Marking	50/7.30	200	±0.05	40	0.8	-0.25	0.25	±0.50	1800
MPX2050GP	0-7.30	4-Pin Ported Element	Gauge	Case 344B-01	Side With Port Attached	50/7.30	200	±0.05	40	0.8	-0.25	0.25	±0.50	1800
MPX2100A	0-1.50	4-Pin Basic Element	Absolute	Case 344-15	Stainless Steel Cap	100/14.50	400	±0.05	40	0.4	-0.25	0.25	±0.50	1800
MPX2100AP	0-1.50	4-Pin Ported Element	Absolute Port	Case 344B-01	Stainless Steel Cap	100/14.50	400	±0.05	40	0.4	-0.25	0.25	±0.50	1800
MPX2100DP	0-1.50	4-Pin Ported Element	Differential Port	Case 344C-01	Side With Part Marking	100/14.50	400	±0.05	40	0.4	-0.25	0.25	±0.50	1800
MPX2200A	0-29.00	4-Pin Basic Element	Absolute	Case 344-15	Stainless Steel Cap	200/29.00	400	±1.00	40	0.2	-1.00	1.00	±0.50	1800
MPX2200DP	0-29.00	4-Pin Ported Element	Differential Port	Case 344C-01	Side With Part Marking	200/29.00	400	±0.05	40	0.2	-0.25	0.25	±0.50	1800

\*Based on end point straight line fit method. Best fit straight line linearity error is approximately 1/2 of listed value.

MPX4000 Series (Signal Conditioned On-Chip)

Mfr.'s Type	Pressure Range	Device Type	Measurement Type	Package Type	Positive Pressure Side Identifier	Pressure Range (kPa/PSI) Max.	Voltage Source (V)	Full Scale Span (V) Typ.	Sensitivity (mV/kPa) Typ.	Accuracy (0 to +85°C)
MPX4115A	20-115 kPa	6-Pin Basic Element	Absolute	Case 867-08	Stainless Steel Cap	115/17.00	5.1	4.59	54.0	±1.50%
MPX4115AP	20-115 kPa	6-Pin Ported Element	Absolute Port	Case 867B-04	Side With Port Attached	115/17.00	5.1	4.59	54.0	±1.50%
MPX4250AP	20-250 kPa	6-Pin Ported Element	Absolute Port	Case 867B-04	Side With Port Attached	250/35.00	5.1	4.69	58.0	±1.50%

MPX5000 Series (Signal Conditioned On-Chip)

MPX5010DP	0-1.45 PSI	6-Pin Ported Element	Differential Port	Case 867C-05	Side With Part Marking	10/1.45	5.0	4.50	450.0	±5.0%
MPX5010GP	0-1.45 PSI	6-Pin Ported Element	Gauge	Case 867B-04	Side With Port Attached	10/1.45	5.0	4.50	450.0	±5.0%
MPX5050DP	0-7.30 PSI	6-Pin Ported Element	Differential Port	Case 867C-05	Side With Part Marking	50/7.30	5.0	4.70	90.0	±2.50%
MPX5050GP	0-7.30 PSI	6-Pin Ported Element	Gauge	Case 867B-04	Side With Port Attached	50/7.30	5.0	4.70	90.0	±2.50%
MPX5100A	2.5-17.00 PSI	6-Pin Basic Element	Absolute	Case 867-08	Stainless Steel Cap	115/17.00	5.0	4.50	45.0	±2.50%
MPX5100AP	2.5-17.00 PSI	6-Pin Ported Element	Absolute Port	Case 867B-04	Side With Port Attached	115/17.00	5.0	4.50	45.0	±2.50%
MPX5100DP	0-14.50 PSI	6-Pin Ported Element	Differential Port	Case 867C-05	Side With Part Marking	100/14.50	5.0	4.50	45.0	±2.50%
MPX5700DP	0-100.00 PSI	6-Pin Ported Element	Differential Port	Case 867C-05	Side With Part Marking	700/100.00	5.0	4.50	6.4	±2.50%
MPX5700GP	0-100.00 PSI	6-Pin Ported Element	Gauge	Case 867B-04	Side With Port Attached	700/100.00	5.0	4.50	6.4	±2.50%
MPX5999D	0-150.00 PSI	6-Pin Basic Element	Differential	Case 867-08	Stainless Steel Cap	1000/150.00	5.0	4.50	4.5	±2.50%

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