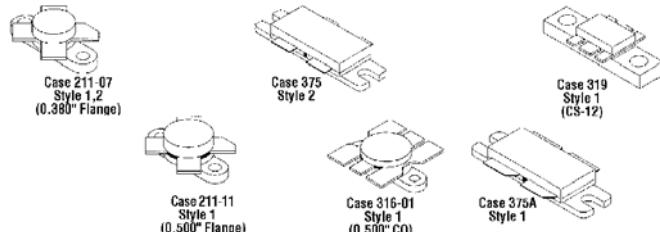




## RF Discrete Transistors and Pressure Sensors

### RF Discrete Transistors



### RF Power MOSFETs

To 225 MHz VHF AM/FM;  $V_{DD} = 28$  Volts, Class AB

For VHF military and commercial aircraft radio transmitters.

Mfr.'s Type	$P_{out}$ Output Power Watts	$P_{in}$ Input Power Watts	$G_{PE}$ (Typ.)/Freq. dB/MHz	Eff. %	$\theta_{JC}$ °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;  $V_{DD} = 28$  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;  $V_{CC} = 12.5$  or 13.6 Volts, Class AB

For economical, high-volume use in CW, AM and SSB applications.

Mfr.'s Type	$P_{out}$ Output Power Watts	$P_{in}$ (Max.) Input Power Watts	$G_{PE}$ (Min.) Gain @ 30 MHz dB	$\theta_{JC}$ °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;  $V_{CC} = 12.5$  Volts, Class C

For VHF FM high-band.

Mfr.'s Type	$P_{out}$ Output Power Watts	$P_{in}$ (Max.) Input Power Watts	$G_{PE}$ (Min.) Gain @ 175 MHz dB	$\theta_{JC}$ °C/W	Package/Style
MRF247*	75	15.00	7	0.7	316-01/1

\*Internal impedance matched.

### RF Power Bipolar Transistors — 900 MHz

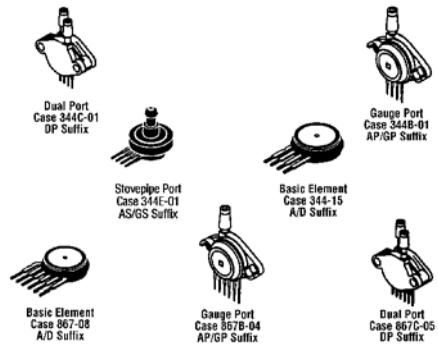
870-960 MHz Band;  $V_{CC} = 26$  Volts, Si Bipolar

For 900 MHz mobile radio band. Devices are listed for mobile and base station applications.

Mfr.'s Type	$P_{out}$ Output Power Watts	Class	$P_{in}$ (Max.) Input Power Watts	$G_{PE}$ (Min.)/Freq. Power Gain dB/MHz	$\theta_{JC}$ °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

- AN1156 Designing Sensor Performance Specifications for MCU-based Systems
- AN1157 A Cookbook Approach to Designing a Differential-Signal Amplifier for Sensor Applications
- AN11573 Understanding Pressure and Pressure Measurement
- AN11583 Motorola's Next Generation Piston Fit Pressure Sensor Packages
- AN11620 A Monolithic Integrated Solution for MAP Applications
- AN11621 An Integrated Silicon Bulk Micromachined Barometric Pressure Sensor Control Unit and External Mount
- AN11622 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* Min.	Temperature Coefficient of Span (%/°C) Typ.	Input Impedance (Ω) Typ.
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
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	475

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### 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
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
MPX2050DP	0-7.30	4-Pin Ported Element	Differential Port	Case 344C-01	Stainless Steel Cap	10/1.45	75	±0.05	25	2.5	-1.00	1.00	±0.50
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
MPX2100A	0-1.50	4-Pin Ported Element	Absolute	Case 344-15	Stainless Steel Cap	100/14.50	400	±0.05	40	0.4	-0.25	0.25	±0.50
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
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
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
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

\*Based on end point straight line fit method. Best fit straight line linearity error is approximately ½ 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 (mV) 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
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