

### HIGH TEMPERATURE ULTRAMINIATURE PRESSURE TRANSDUCER

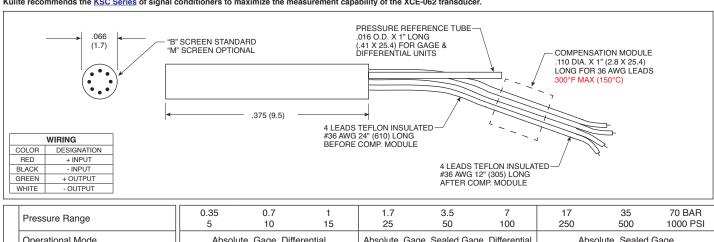
### **XCE-062 SERIES**

- Wide Temperature Capability -65°F To 525°F
- · Ideal For Turbine Engine Probes and Wind Tunnel Applications
- 50 Year History Of Successful Applications In Wind Tunnel And Flight Test Programs
- Patented Silicon on Silicon Integrated Sensor VIS®
- Size And Shape Ideal For Incorporation In User Designed Probes
- **Excellent Static And Dynamic Performance**

The XCE-062 Series allow for a very rugged package suited for probes, pressure rakes and other similar test set ups. This transducer is well suited for both dynamic and static pressure measurements in benign or harsh environments. Its wide operating temperature range (-65°F to +525°F) makes it ideal for numerous applications in Aerospace and other areas of industry.



Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the XCE-062 transducer.



	Pressure Range	0.35 5	0.7 10	1 15	1.7 25	3.5 50	7 100	17 250	35 500	70 BAR 1000 PSI		
	Operational Mode	Absolute, Gage, Differential Absolute, Gage, Sealed Gage, Differential Absolute, Sealed Gage										
	Over Pressure				2 Tim	es Rated Pres	sure					
INPUT	Burst Pressure				3 Tim	nes Rated Pres	sure					
Z	Pressure Media			All	Nonconductive	, Noncorrosive	Liquids or Gas	es				
	Rated Electrical Excitation					10 VDC/AC						
	Maximum Electrical Excitation	12 VDC/AC										
	Input Impedance	1000 Ohms (Min.)										
	Output Impedance	1000 Ohms (Nom.)										
	Full Scale Output (FSO)	100 mV (Nom.)										
	Residual Unbalance	± 5 mV (Typ.)										
5	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)										
OUTPUT	Resolution	Infinitesimal										
0	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	150	175	200	240	300	380	550	700	1000		
	Acceleration Sensitivity % FS/g Perpendicular	1.5x10⁻³	1.0x10 <sup>-3</sup>	6.5x10 <sup>-4</sup>	5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup>	1.5x10 <sup>-4</sup>	1.0x10 <sup>-4</sup>	6.0x10 <sup>-5</sup>	4.5x10 <sup>-5</sup>		
	Insulation Resistance	100 Megohm Min. @ 50 VDC										
١.	Operating Temperature Range	-65°F to +525°F (-55°C to +273°C) Sensor Only										
IAI	Compensated Temperature Range	80°F to +450°F (25°C to +235°C) Sensor Only										
ENVIRONMENTAI	Thermal Zero Shift	± 1% FS/100°F (Typ.)										
NO.	Thermal Sensitivity Shift				±	1% /100°F (Typ	D.)					
Ž	Steady Acceleration	10,000g. (Max.)										
ш	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)										
, AL	Electrical Connection	4 Leads 36 AWG 36" Long										
PHYSICAL	Weight	.4 Gram (Nom.) Excluding Module and Leads										
Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon									icon			

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (P) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production applications. For products designed to be used in production programs, please consult the factory.



## HIGH TEMPERATURE MINIATURE PRESSURE TRANSDUCER

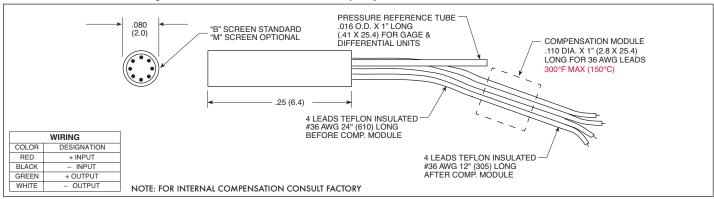
### **XCE-080 SERIES**

- Wide Temperature Capability -65°F To 525°F
- Ideal For Turbine Engine Probes and Wind Tunnel Applications
- 50 Year History Of Successful Applications In Wind Tunnel And Flight Test Programs
- Patented Silicon on Silicon Integrated Sensor VIS®
- Size And Shape Ideal For Incorporation In User Designed Probes
- Excellent Static And Dynamic Performance

The XCE-080 Series allow for a very rugged package suited for probes, pressure rakes and other similar test set ups. This transducer is well suited for both dynamic and static pressure measurements in benign or harsh environments. Its wide operating temperature range (-65°F to +525°F) makes it ideal for numerous applications in Aerospace and other areas of industry.



Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the XCE-080 transducer.



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	Pressure Range	0.35 5	0.7 10	1 15	1.7 25	3.5 50	7 100	17 250	35 500	70 BAR 1000 PSI		
	Operational Mode	Absolute, Gage, Differential Absolute, Gage, Sealed Gage, Differential Absolute, Sealed Gage										
	Over Pressure				2 Tim	nes Rated Pres	sure					
INPUT	Burst Pressure				3 Tim	nes Rated Pres	sure					
Z	Pressure Media			All	Nonconductive	, Noncorrosive	Liquids or Gas	es				
	Rated Electrical Excitation	10 VDC/AC										
	Maximum Electrical Excitation	12 VDC/AC										
	Input Impedance	1000 Ohms (Min.)										
	Output Impedance	1000 Ohms (Nom.)										
	Full Scale Output (FSO)	100 mV (Nom.)										
	Residual Unbalance	± 5 mV (Typ.)										
5	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)										
OUTPUT	Resolution	Infinitesimal										
0	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	150	175	200	240	300	380	550	700	1000		
	Acceleration Sensitivity % FS/g Perpendicular	1.5x10⁻³	1.0x10 <sup>-3</sup>	6.5x10 <sup>-4</sup>	5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup>	1.5x10 <sup>-4</sup>	1.0x10 <sup>-4</sup>	6.0x10 <sup>-5</sup>	4.5x10 <sup>-5</sup>		
	Insulation Resistance	100 Megohm Min. @ 50 VDC										
١.	Operating Temperature Range	-65°F to +525°F (-55°C to +273°C) Sensor Only										
TAL	Compensated Temperature Range	80°F to +450°F (25°C to +235°C) Sensor Only										
ME	Thermal Zero Shift				± 19	% FS/100°F (Ty	/p.)					
NO.	Thermal Sensitivity Shift				±	1% /100°F (Typ	).)					
ENVIRONMENTAL	Steady Acceleration	10,000g. (Max.)										
ш	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)										
;AL	Electrical Connection	4 Leads 36 AWG 36" Long										
PHYSICAL	Weight	.4 Gram (Nom.) Excluding Module and Leads										
Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Sil								Silicon on Sil	icon			

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (H) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production applications. For products designed to be used in production programs, please consult the factory.



# HIGH TEMPERATURE MINIATURE PRESSURE TRANSDUCER

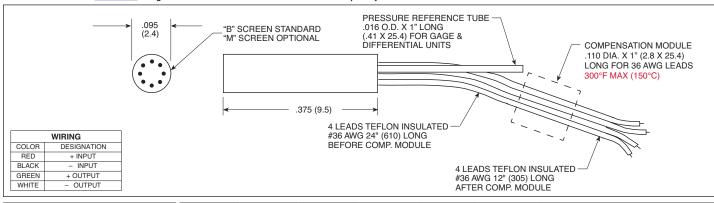
### **XCE-093 SERIES**

- Wide Temperature Capability -65°F To 525°F
- Ideal For Turbine Engine Probes and Wind Tunnel Applications
- 50 Year History Of Successful Applications In Wind Tunnel And Flight Test Programs
- Patented Silicon on Silicon Integrated Sensor VIS®
- · Size And Shape Ideal For Incorporation In User Designed Probes
- Excellent Static And Dynamic Performance

The XCE-093 Series allow for a very rugged package suited for probes, pressure rakes and other similar test set ups. This transducer is well suited for both dynamic and static pressure measurements in benign or harsh environments. Its wide operating temperature range (-65°F to +525°F) makes it ideal for numerous applications in Aerospace and other areas of industry.



Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the XCE-093 transducer.



WHITE – OUTPUT	AFTER COMP. MODULE										
Pressure Range	0.35 5	0.7 10	1 15	1.7 25	3.5 50	7 100	17 250	35 500	70 BAR 1000 PSI		
Operational Mode	Absolute, Gage, Differential Absolute, Gage, Sealed Gage, Differential Absolute, Sealed Gage										
Over Pressure			2 Tim	es Rated Press	sure With No C	hange In Calibr	ation				
Burst Pressure				3 Tim	nes Rated Pres	sure					
Pressure Media			All	Nonconductive	, Noncorrosive	Liquids or Gas	es				
Rated Electrical Excitation	10 VDC/AC										
Maximum Electrical Excitation	12 VDC/AC										
Input Impedance	1000 Ohms (Min.)										
Output Impedance	1000 Ohms (Nom.)										
Full Scale Output (FSO)	100 mV (Nom.)										
Residual Unbalance	± 5 mV (Typ.)										
Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)										
Resolution	Infinitesimal										
Natural Frequency of Sensor Without Screen (KHz) (Typ.)	150	175	200	240	300	380	550	700	1000		
Acceleration Sensitivity % FS/g Perpendicular	1.5x10 <sup>-3</sup>	1.0x10 <sup>-3</sup>	6.5x10 <sup>-4</sup>	5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup>	1.5x10 <sup>-4</sup>	1.0x10 <sup>-4</sup>	6.0x10 <sup>-5</sup>	4.5x10 <sup>-5</sup>		
Insulation Resistance	100 Megohm Min. @ 50 VDC										
Operating Temperature Range	-65°F to +525°F (-55°C to +273°C) Sensor Only										
Compensated Temperature Range	80°F to +450°F (25°C to +235°C) Sensor Only										
Thermal Zero Shift	± 1% FS/100°F (Typ.)										
Thermal Sensitivity Shift				±	1% /100°F (Typ	o.)					
Steady Acceleration	10,000g. (Max.)										
Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)										
Electrical Connection	4 Leads 36 AWG 36" Long										
Weight	.4 Gram (Nom.) Excluding Module and Leads										
Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon										
	Pressure Range Operational Mode Over Pressure Burst Pressure Pressure Media Rated Electrical Excitation Input Impedance Output Impedance Output Impedance Full Scale Output (FSO) Residual Unbalance Combined Non-Linearity, Hysteresis and Repeatability Resolution Natural Frequency of Sensor Without Screen (KHz) (Typ.) Acceleration Sensitivity % FS/g Perpendicular Insulation Resistance Operating Temperature Range Compensated Temperature Range Thermal Zero Shift Thermal Sensitivity Shift Steady Acceleration Linear Vibration Electrical Connection Weight	Pressure Range Operational Mode Over Pressure Burst Pressure Pressure Media Rated Electrical Excitation Input Impedance Output Impedance Output Impedance Full Scale Output (FSO) Residual Unbalance Combined Non-Linearity, Hysteresis and Repeatability Resolution Natural Frequency of Sensor Without Screen (KHz) (Typ.) Acceleration Sensitivity % FS/g Perpendicular Insulation Resistance Operating Temperature Range Compensated Temperature Range Thermal Zero Shift Thermal Sensitivity Shift Steady Acceleration Linear Vibration Electrical Connection Weight	Pressure Range  Operational Mode  Over Pressure  Burst Pressure  Pressure Media  Rated Electrical Excitation  Input Impedance  Output Impedance  Full Scale Output (FSO)  Residual Unbalance  Combined Non-Linearity, Hysteresis and Repeatability  Resolution  Natural Frequency of Sensor Without Screen (KHz) (Typ.)  Acceleration Sensitivity % FS/g Perpendicular  Insulation Resistance  Operating Temperature Range  Compensated Temperature Range  Thermal Zero Shift  Thermal Sensitivity Shift  Steady Acceleration  Linear Vibration  Electrical Connection  Weight	Pressure Range Operational Mode Absolute, Gage, Differential Over Pressure Burst Pressure Pressure Media Rated Electrical Excitation Maximum Electrical Excitation Input Impedance Output Impedance Output Impedance Full Scale Output (FSO) Residual Unbalance Combined Non-Linearity, Hysteresis and Repeatability Resolution Natural Frequency of Sensor Without Screen (KHz) (Typ.) Acceleration Sensitivity % FS/g Perpendicular Insulation Resistance Operating Temperature Range Compensated Temperature Range Thermal Zero Shift Thermal Sensitivity Shift Steady Acceleration Linear Vibration Electrical Connection Weight	Pressure Range	Pressure Range    0.35	Pressure Range    0.35	Pressure Range	Pressure Range 0.35		

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (N) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production applications. For products designed to be used in production programs, please consult the factory.

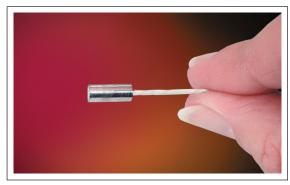


### HIGH TEMPERATURE SHORT LENGTH PRESSURE TRANSDUCER

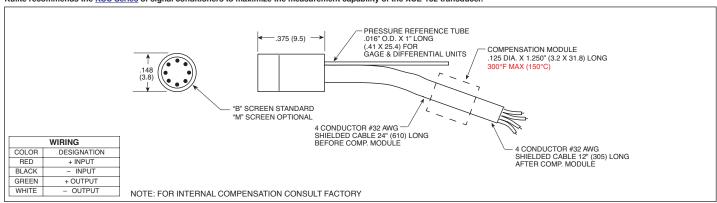
### **XCE-152 SERIES**

- Wide Temperature Capability -65°F To 525°F
- Ideal For Turbine Engine Probes and Wind Tunnel Applications
- 50 Year History Of Successful Applications In Wind Tunnel And Flight Test Programs
- Patented Silicon on Silicon Integrated Sensor VIS®
- Size And Shape Ideal For Incorporation In User Designed Probes
- Excellent Static And Dynamic Performance

The XCE-152 Series allow for a very rugged package suited for probes, pressure rakes and other similar test set ups. This transducer is well suited for both dynamic and static pressure measurements in benign or harsh environments. Its wide operating temperature range (-65°F to +525°F) makes it ideal for numerous applications in Aerospace and other areas of industry.



Kulite recommends the KSC Series of signal conditioners to maximize the measurement capability of the XCE-152 transducer.



	Pressure Range	0.35 5	0.7 10	1 15	1.7 25	3.5 50	7 100	17 250	35 500	70 BAR 1000 PSI			
	Operational Mode	Absolute, Gage, Differential Absolute, Gage, Sealed Gage, Differential Absolute, Sealed Gage											
	Over Pressure	2 Times Rated Pressure											
INPUT	Burst Pressure	3 Times Rated Pressure											
Z	Pressure Media			All	Nonconductive	, Noncorrosive	Liquids or Gas	ses					
	Rated Electrical Excitation	10 VDC/AC											
	Maximum Electrical Excitation	12 VDC/AC											
	Input Impedance	1000 Ohms (Min.)											
	Output Impedance	1000 Ohms (Nom.)											
	Full Scale Output (FSO)	100 mV (Nom.)											
	Residual Unbalance	± 5 mV (Typ.)											
Į.	Combined Non-Linearity, Hysteresis and Repeatability	± 0.1% FSO BFSL (Typ.), ± 0.5% FSO (Max.)											
OUTPUT	Resolution	Infinitesimal											
0	Natural Frequency of Sensor Without Screen (KHz) (Typ.)	150	175	200	240	300	380	550	700	1000			
	Acceleration Sensitivity % FS/g Perpendicular	1.5x10 <sup>-3</sup>	1.0x10	<sup>3</sup> 6.5x10 <sup>-4</sup>	5.0x10 <sup>-4</sup>	3.0x10 <sup>-4</sup>	1.5x10 <sup>-4</sup>	1.0x10 <sup>-4</sup>	6.0x10 <sup>-5</sup>	4.5x10 <sup>-5</sup>			
	Insulation Resistance	100 Megohm Min. @ 50 VDC											
Γ.	Operating Temperature Range	-65°F to +525°F (-55°C to +273°C) Sensor Only											
TAL	Compensated Temperature Range	80°F to +450°F (25°C to +235°C) Sensor Only											
ME	Thermal Zero Shift	± 1% FS/100°F (Typ.)											
ENVIRONMENTAL	Thermal Sensitivity Shift				±	1% /100°F (Typ	D.)						
M	Steady Acceleration					10,000g. (Max.)	)						
ш	Linear Vibration	10-2,000 Hz Sine, 100g. (Max.)											
, AL	Electrical Connection	4 Conductor 32 AWG Shielded Cable 36" Long											
PHYSICAL	Weight	.3 Gram (Nom.) Excluding Module and Leads											
PH	Pressure Sensing Principle	Fully Active Four Arm Wheatstone Bridge Dielectrically Isolated Silicon on Silicon											

Note: Custom pressure ranges, accuracies and mechanical configurations available. Dimensions are in inches. Dimensions in parenthesis are in millimeters. All dimensions nominal. (J) Continuous development and refinement of our products may result in specification changes without notice. Copyright © 2014 Kulite Semiconductor Products, Inc. All Rights Reserved. Kulite miniature pressure transducers are intended for use in test and research and development programs and are not necessarily designed to be used in production programs, please consult the factory.