



Is Now Part of

**To learn more about ON Semiconductor, please visit our website at
www.onsemi.com**

Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.



FSA2275 / FSA2275A $\dot{\text{I}}$ DPDT (0.5) HiFi Audio Switch w/ Negative Swing

Features

V_{DD} Operating Range: 2.5 to 5.5 V

External Capacitor Connection for Pop and Click Noise Suppression

Power-Off Protection on Common Ports

$R_{ON} = 0.5$ (Typ.) at 2.5 V V_{DD}

THD+N = -105 dB; 2 V_{RMS} , 20 k Ω Load; f = 1 kHz

$X_{TALK} = -134$ dB at 1 V_{RMS} , 50 Ω Load; f = 1 kHz

Off Isolation = -103 dB at 1 V_{RMS} , 50 Ω Load; f = 1 kHz

12

FSA2275A features ultra-low audio R_{ON} of 0.5 Ω (typical) at 2.5 V V_{CC} . The FSA2275 / FSA2275A operates over a V_{CC} range of 2.5 V to 5.5 V, is fabricated with sub-micron CMOS technology to achieve fast switching speeds, and is designed for break-before-make operation. To minimize pop and

FSA2275 / FSA2275A $\dot{\text{I}}$ DPDT (0.5) HiFi Audio Switch w/ Negative Swing

Pin Configuration

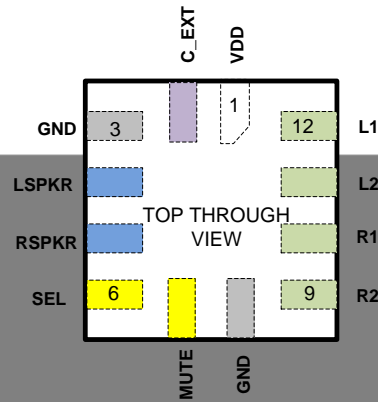


Figure 2. Pin Assignment (Top Through View)

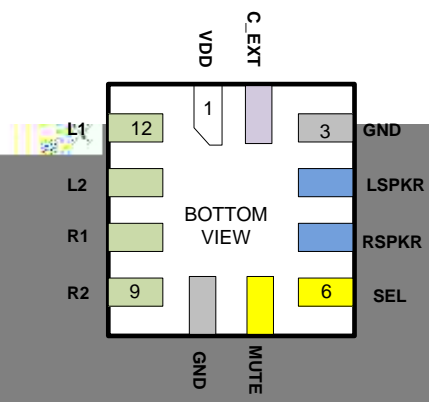
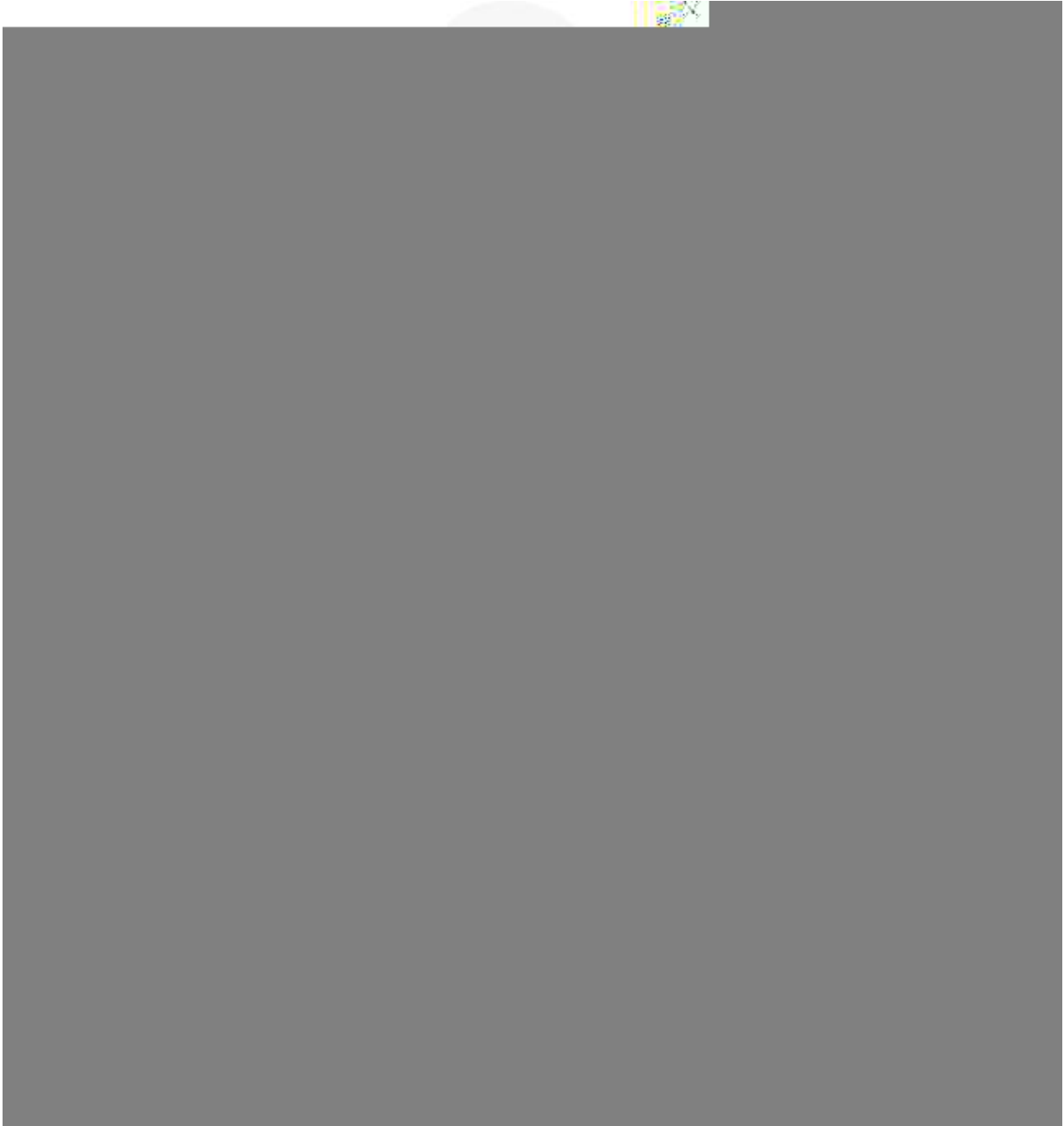


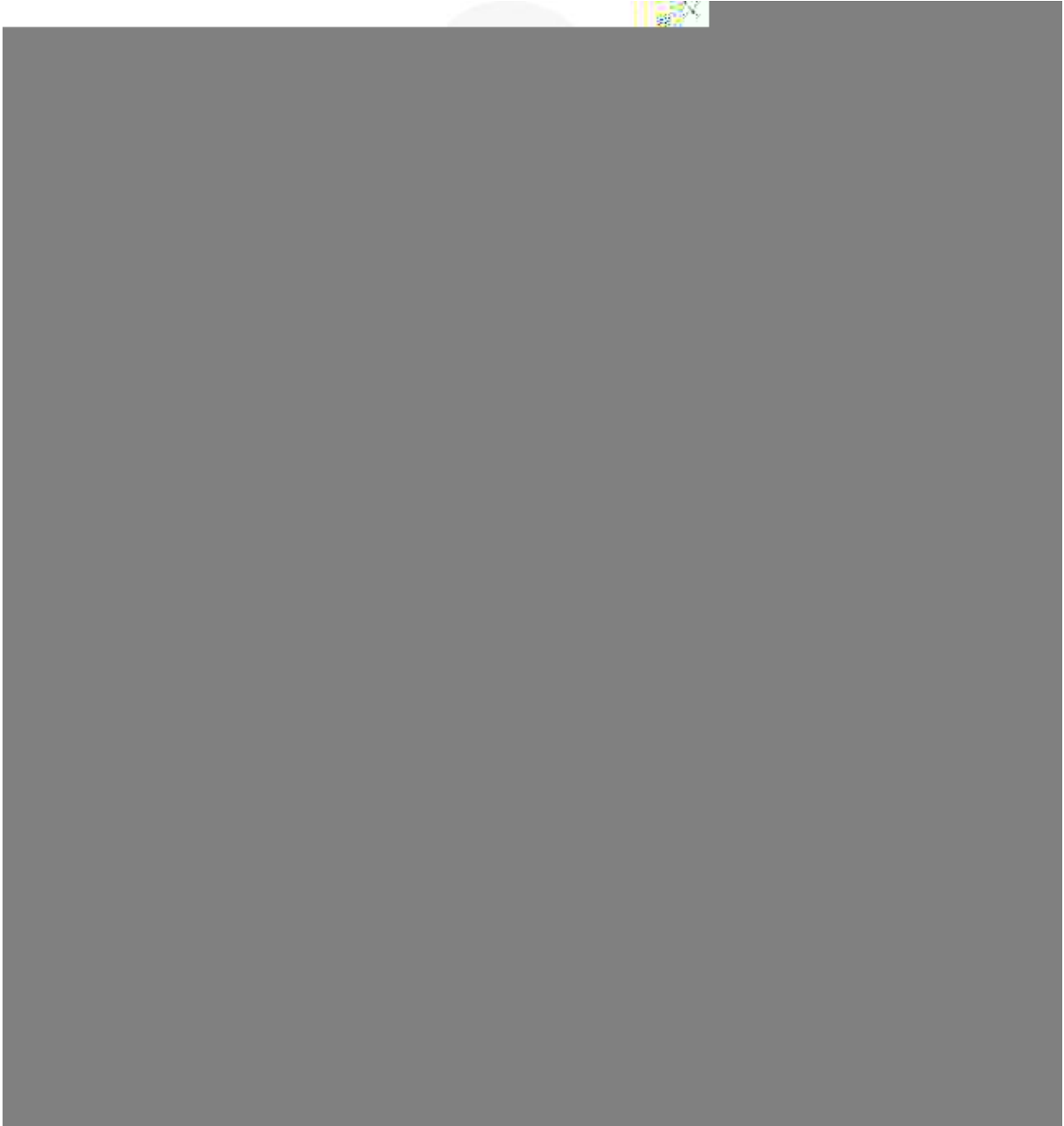
Figure 3. Pin Assignment (Bottom View)

Pin Descriptions

Pin	Name	Description
1	VDD	Power Supply (2.5 to 5.5 V)
2	C_EXT	Slow Turn On External Capacitor
3	GND	Ground
4	LSPKR	Audio L _{SPPKR} Common I/O Port
5	RSPKR	Audio R _{SPPKR} Common I/O Port
6	SEL	Select Pin
7	MUTE	Mute Enable - Active High
8	GND	Ground
9	R2	Audio – Right Channel Source2 I/O Port
10	R1	Audio – Right Channel Source1 I/O Port

Absolute Maximum Ratings

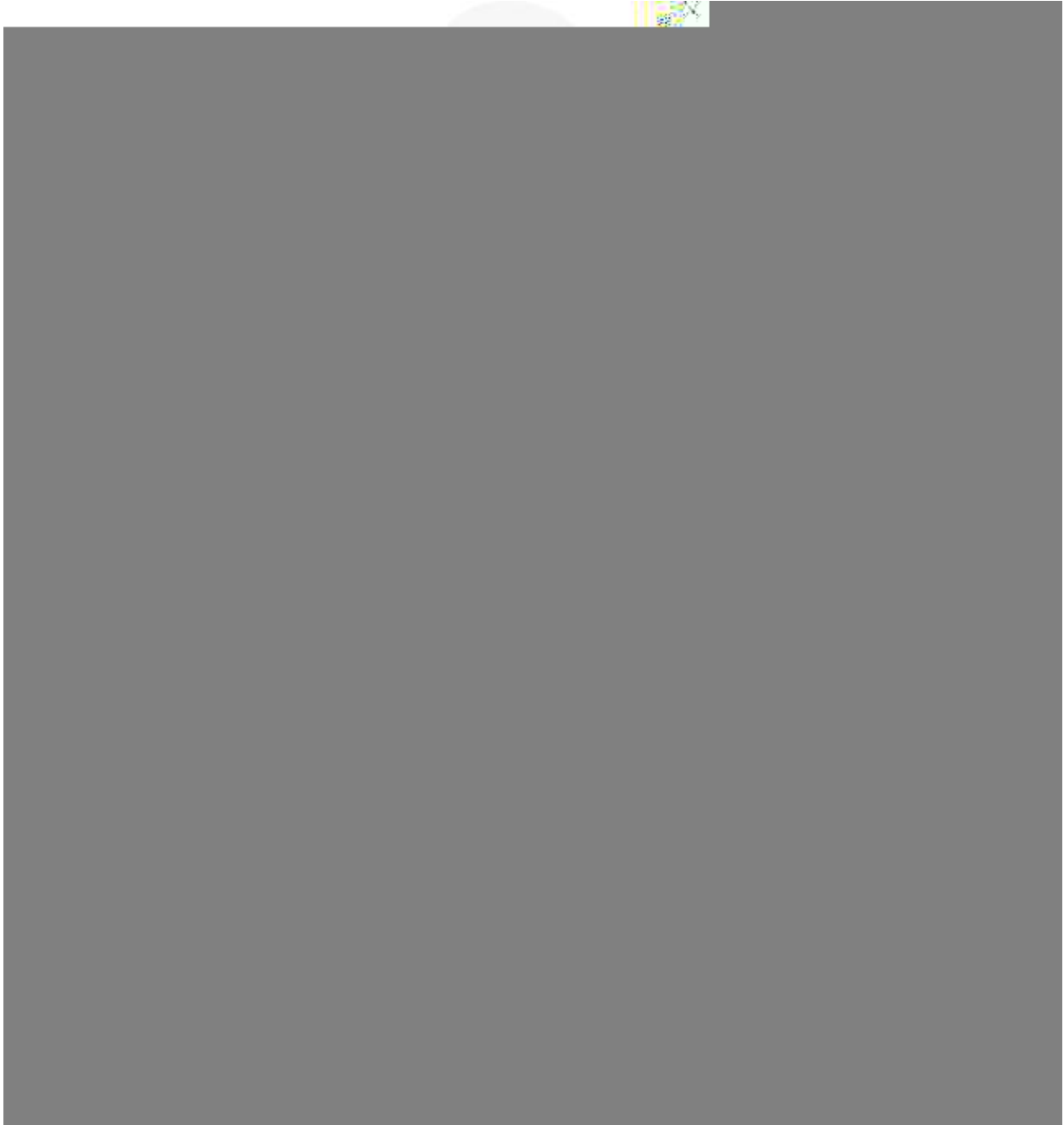


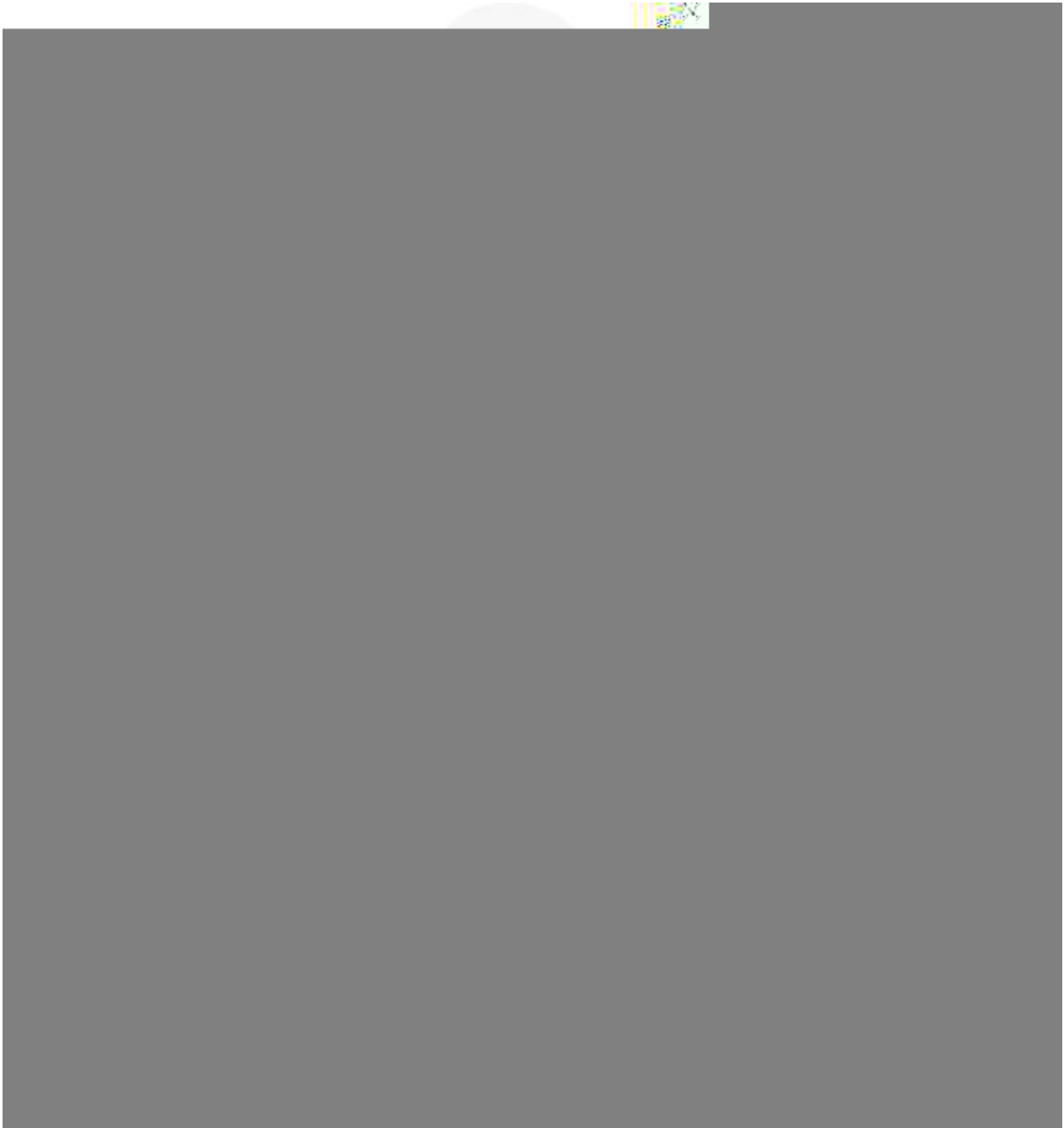


AC Characteristics

$V_{DD} = 2.5\text{ V to }5.5\text{ V}$, $V_{DD}(\text{Typ.}) = 3.3\text{ V}$. $T_A = -40^\circ\text{C to }85^\circ\text{C}$. $T_A(\text{Typ.}) = 25^\circ\text{C}$, unless otherwise specified

Symbol	Parameter	Condition	V_{DD}	$T_A = -40^\circ\text{C to }+85^\circ\text{C}$	Unit
			(V)	Min. ████████	





Test Diagrams

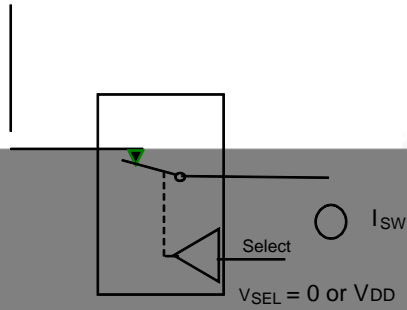


Figure 4. On Resistance

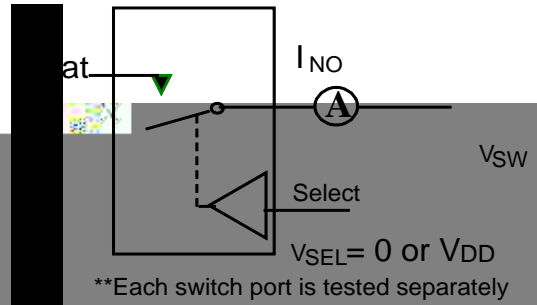


Figure 5. Off Leakage

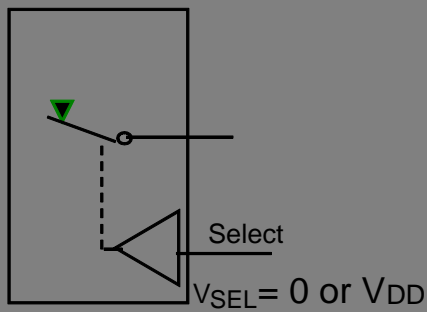


Figure 6. On Leakage

Figure 7. Test Circuit Load

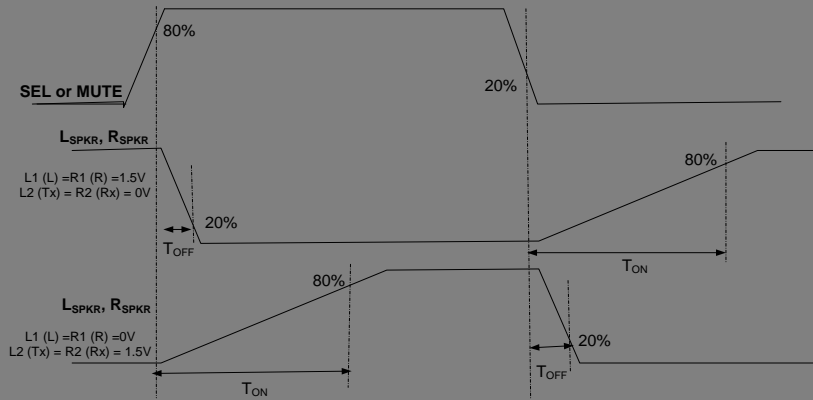


Figure 8. Turn On/Off Waveforms (SEL or MUTE to Output)

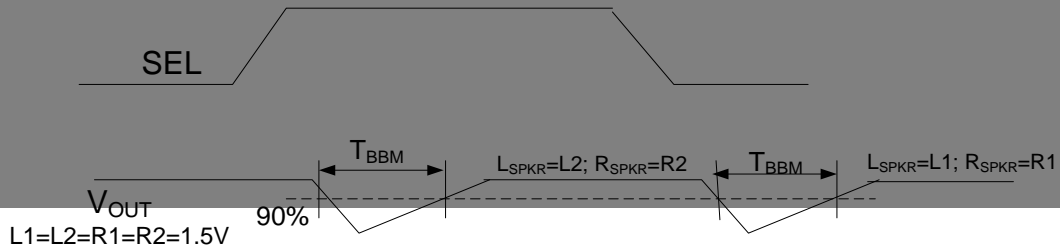
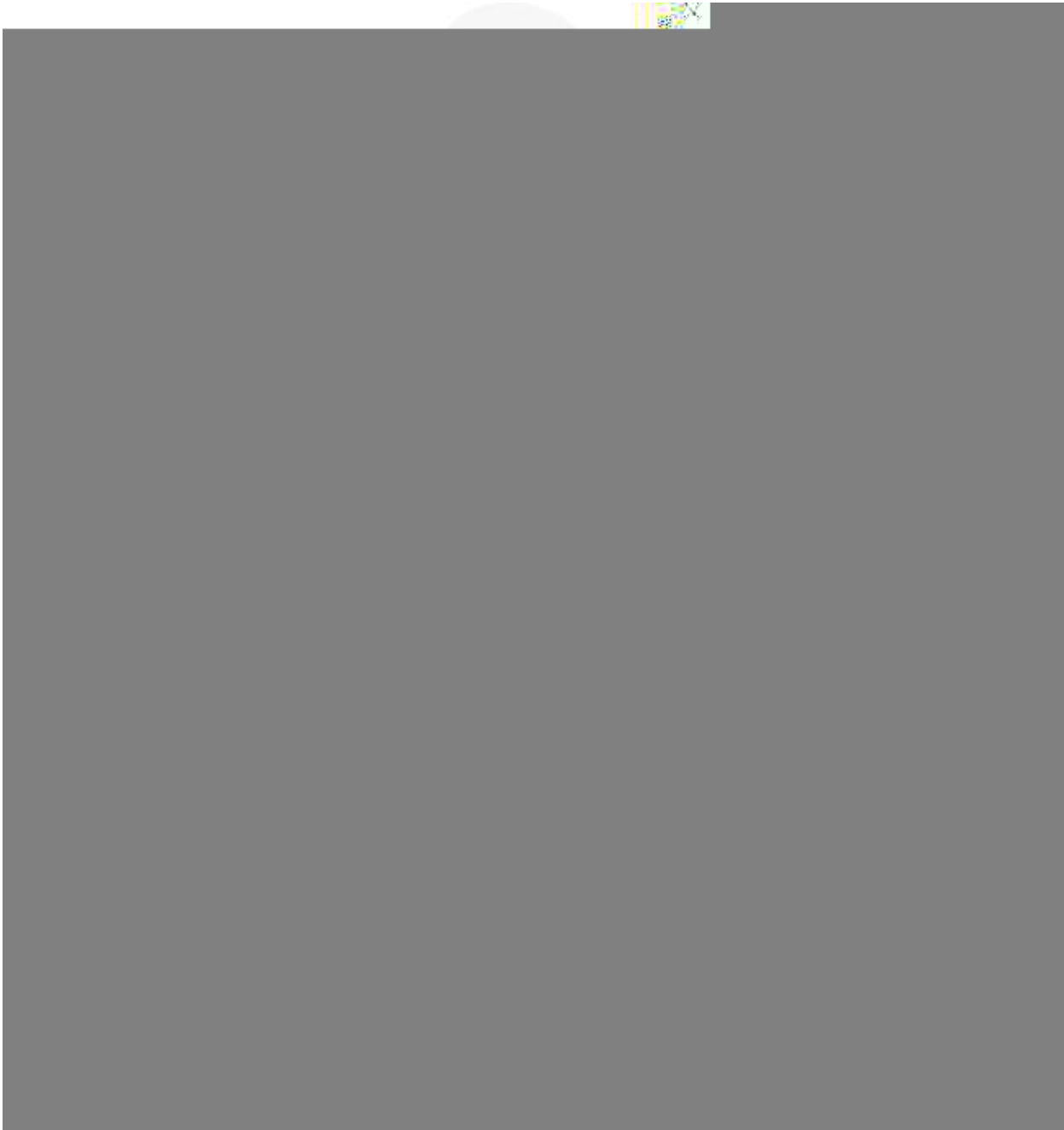
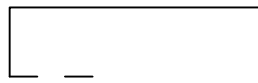


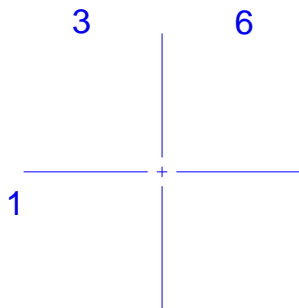
Figure 9. Break Before Make Interval Timing





SIDE VIEW

RECOMMENDED LAND PATTERN



BOTTOM VIEW



DETAIL A
SCALE 2:1

NOTES:

- A. PACKAGE DOES NOT CONFORM TO ANY JEDEC STANDARD.
- B. DIMENSIONS ARE IN MILLIMETERS.
- C. LAND PATTERN RECOMMENDATION IS EXISTING INDUSTRY LAND PATTERN.
- D. DRAWING FILENAME: MKT-UMLP12ArevF

ON Semiconductor and are trademarks of Semiconductor Components Industries, LLC dba ON Semiconductor or its subsidiaries in the United States and/or other countries. ON Semiconductor owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of ON Semiconductor's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. ON Semiconductor reserves the right to make changes without further notice to any products herein. ON Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does ON Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using ON Semiconductor products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by ON Semiconductor. "Typical" parameters which may be provided in ON Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. ON Semiconductor does not convey any license under its patent rights nor the rights of others. ON Semiconductor products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use ON Semiconductor products for any such unintended or unauthorized application, Buyer shall indemnify and hold ON Semiconductor and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that ON Semiconductor was negligent regarding the design or manufacture of the part. ON Semiconductor is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

PUBLICATION ORDERING INFORMATION

N. American Technical Support: 800-282-9855 Toll Free
USA/Canada
Europe, Middle East and Africa Technical Support: