ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °C, unless otherwise specified)				
PARAMETER	**TEST CONDITION**	**SYMBOL**	**VALUE**	**UNIT**
SSR				
INPUT				
LED continuous forward current		I_F	50	mA
LED reverse voltage	$I_R \leq 10$ µA	V_R	5	V
OUTPUT				
DC or peak AC load voltage	$I_L \leq 50$ µA	V_L	350	V
Continuous DC load current		I_L	120	mA
SSR				
Total power dissipation		P_{diss}	600	mW
Ambient temperature range		T_{amb}	-40 to +85	°C
Storage temperature range		T_{stg}	-40 to +150	°C
Soldering temperature (1)	t = 10 s max.	T_{sld}	260	°C
Isolation test voltage (for 60 s)		V_{ISO}	5300	V_{RMS}
Isolation resistance	V_{IO} = 500 V, T_{amb} = 25 °C	R_{IO}	$\geq 10^{12}$	Ω
	V_{IO} = 500 V, T_{amb} = 100 °C	R_{IO}	$\geq 10^{11}$	Ω
OPTOCOUPLER				
INPUT				
LED continuous forward current		I_F	50	mA
LED reverse voltage	$I_R \leq 10$ µA	V_R	5	V
OUTPUT				
Collector emitter breakdown voltage		BV_{CEO}	30	V
Phototransistor power dissipation		P_{diss}	150	mW

Notes

- Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. Functional operation of the device is not implied at these or any other conditions in excess of those given in the operational sections of this document. Exposure to absolute maximum ratings for extended periods of the time can adversely affect reliability

(1) Refer to reflow profile for soldering conditions for surface mounted devices (SMD). Refer to wave profile for soldering conditions for through hole devices (DIP)

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)							
PARAMETER	**TEST CONDITION**	**PART**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
SSR							
INPUT							
LED forward current switch turn-on	I_L = 100 mA, t = 10 ms		I_{Fon}	-	0.7	2	mA
LED forward current switch turn-off	V_L = ± 300 V		I_{Foff}	0.2	0.6	-	mA
LED forward voltage	I_F = 10 mA		V_F	1.15	1.26	1.45	V
OUTPUT							
On-resistance AC/DC, pins 4 (±) to 6 (±)	I_F = 5 mA, I_L = ± 50 mA		R_{ON}	12	20	25	Ω
Current limit	I_F = 5 mA, t = 5 ms, V_L = ± 6 V	LH1529AAC, LH1529AACTR	I_{limit}	230	260	370	mA
		LH1529BB	I_{limit}	170	210	250	mA
		LH1529BAC, LH1529BACTR	I_{limit}	170	210	250	mA
Off-state leakage current	I_F = 0 mA, V_L = ± 100 V		I_O	-	0.02	200	nA
	I_F = 0 mA, V_L = ± 350 V		I_O	-	-	1	µA
Output capacitance pin 7 to pin 8	I_F = 0 mA, V_L = 1 V		C_O	-	55	-	pF
	I_F = 0 mA, V_L = 50 V		C_O	-	10	-	pF
Capacitance (input to output)	V_{ISO} = 1 V		C_{IO}	-	1.3	-	pF

ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)							
PARAMETER	**TEST CONDITION**	**PART**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
OPTOCOUPLER							
LED forward current	I_F = 10 mA		V_F	0.9	1.2	1.5	V
Saturation voltage	I_F = 16 mA, I_C = 2 mA		V_{CEsat}	-	0.7	0.5	V
Collector emitter dark current	I_F = 0 mA, V_{CE} = 5 V		I_{CEO}	-	-	500	nA
Trickle current leakage	I_F = 5 µA, V_{CE} = 5 V		I_{CEO}	-	-	1	µA
DC current transfer ratio	I_F = 6 mA, V_{CE} = 0.5 V	LH1529AAC, LH1529AACTR	CTR_{DC}	33	100	-	%
		LH1529BB	CTR_{DC}	100	165	-	%
		LH1529BAC, LH1529BACTR	CTR_{DC}	100	165	-	%

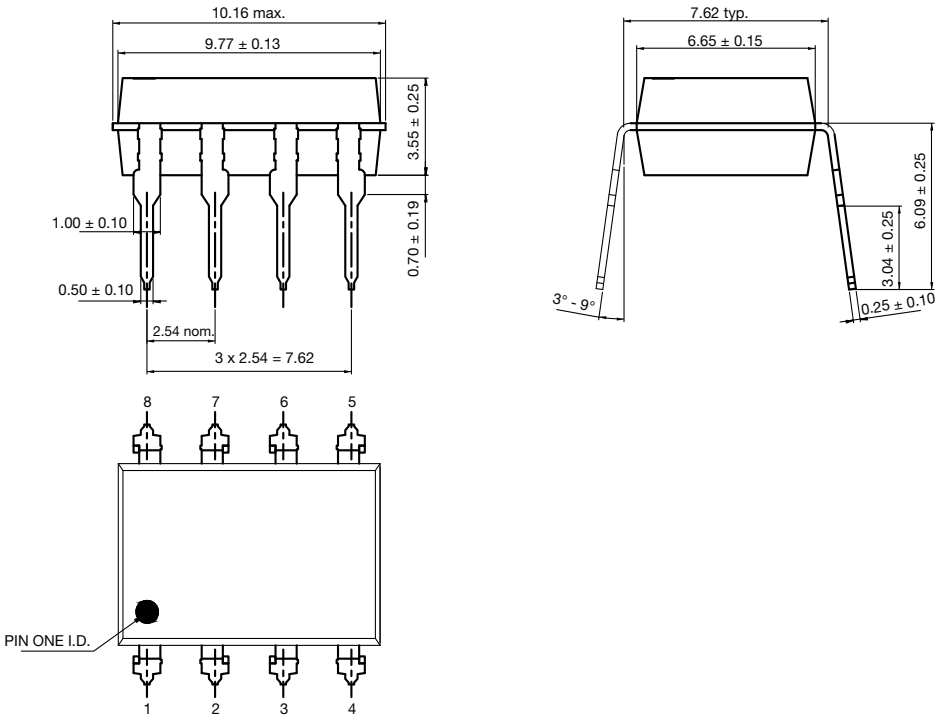
Note

- Minimum and maximum values are testing requirements. Typical values are characteristics of the device and are the result of engineering evaluations. Typical values are for information only and are not part of the testing requirements

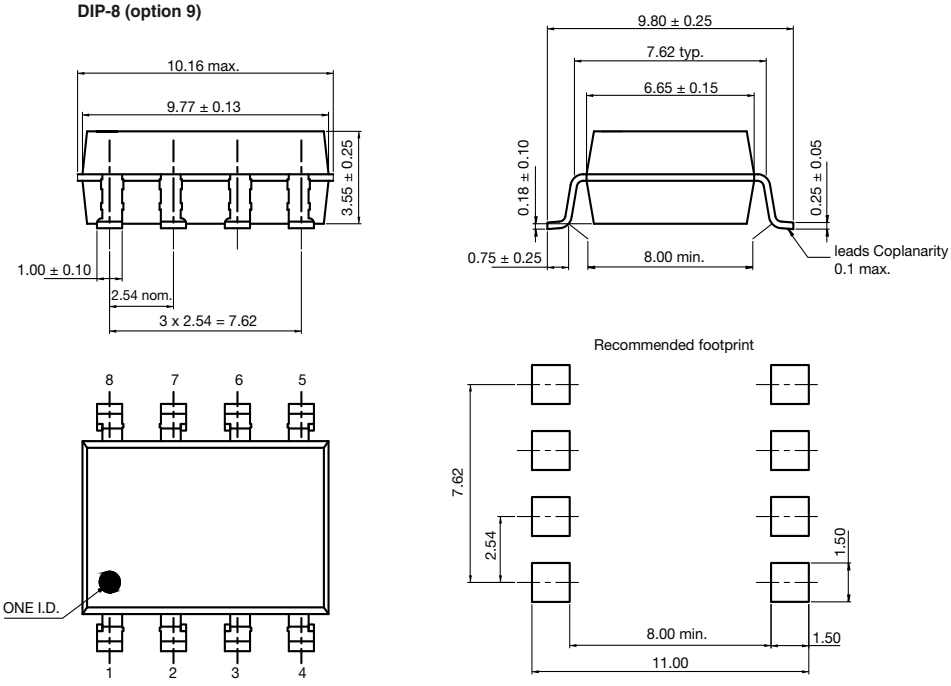
SWITCHING CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)							
PARAMETER	**TEST CONDITION**	**PART**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Turn-on time	I_F = 5 mA, I_L = 50 mA	LH1529AAC, LH1529AACTR	t_{on}	-	2	3	ms
		LH1529BB	t_{on}	-	1.3	2.5	ms
		LH1529BAC, LH1529BACTR	t_{on}	-	1.3	2.5	ms
Turn-off time	I_F = 5 mA, I_L = 50 mA	LH1529AAC, LH1529AACTR	t_{off}	-	0.6	3	ms
		LH1529BB	t_{off}	-	0.6	2.5	ms
		LH1529BAC, LH1529BACTR	t_{off}	-	0.6	2.5	ms

PACKAGE DIMENSIONS in millimeters

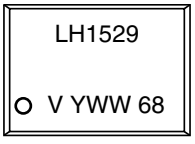
DIP-8



DIP-8 (option 9)



PACKAGE MARKING (example)



Note

- Tape and reel suffix (TR) is not part of the package marking

Footprint and Schematic Information for LH1529

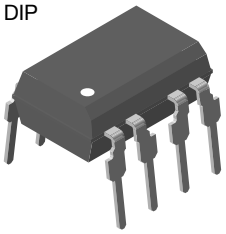
The footprint and schematic symbols for the following parts can be accessed using the associated links. They are available in Eagle, Altium, KiCad, OrCAD / Allegro, Pulsonix, and PADS.

Note that the 3D models for these parts can be found on the Vishay product page.

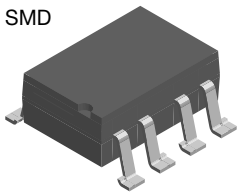
PART NUMBER	FOOTPRINT / SCHEMATIC
LH1529AAC	www.snapeda.com/parts/LH1529AAC/Vishay/view-part
LH1529AACTR	www.snapeda.com/parts/LH1529AACTR/Vishay/view-part
LH1529BAC	www.snapeda.com/parts/LH1529BAC/Vishay/view-part
LH1529BACTR	www.snapeda.com/parts/LH1529BACTR/Vishay/view-part
LH1529BB	www.snapeda.com/parts/LH1529BB/Vishay/view-part
LH1529FPTR	www.snapeda.com/parts/LH1529FPTR/Vishay/view-part
LH1529GP	www.snapeda.com/parts/LH1529GP/Vishay/view-part
LH1529GPTR	www.snapeda.com/parts/LH1529GPTR/Vishay/view-part

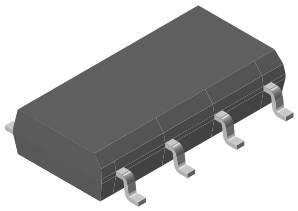
For technical issues and product support, please contact optocoupleranswers@vishay.com.

DIP



SMD





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