

450mA, 75V Switching Diode

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- High surge current capability
- Compliance to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- On-board DC/DC converter

MECHANICAL DATA

- Case: QUADRO Mini-MELF (LS34)
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 0.06 (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	450	mA
V_{RRM}	75	V
I_{FSM}	2	A
V_F at $I_F=100mA$	1.00	V
$T_{J\ MAX}$	175	°C
Package	LS34	
Configuration	Single dice	



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	PART NUMBER	UNIT
Repetitive peak reverse voltage	V_{RRM}	75	V
Forward current	$I_{F(AV)}$	450	mA
Peak Forward Surge Current	I_{FSM}	2	A
Junction temperature range	T_J	-65 ~ 175	°C
Storage temperature range	T_{STG}	-65 ~ 175	°C

THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	300	°C/W

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	LS4448, LS914B $I_F = 5.0\text{mA}$, $T_J = 25^\circ\text{C}$	V_F	--	0.72	V
	LS4148 $I_F = 10.0\text{mA}$, $T_J = 25^\circ\text{C}$		--	1.0	
	LS4448, LS914B $I_F = 100\text{mA}$, $T_J = 25^\circ\text{C}$		--	1.0	
Reverse current @ rated V_R per diode ⁽²⁾	$V_R = 20\text{V}$ $T_J = 25^\circ\text{C}$	I_R	--	25	nA
	$V_R = 75\text{V}$ $T_J = 25^\circ\text{C}$		--	5	μA
Junction capacitance	1 MHz, $V_R = 0\text{V}$	C_J	--	4	pF

Notes:

1. Pulse test with $PW = 0.3\text{ ms}$
2. Pulse test with $PW = 30\text{ ms}$

ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
LS4148 (Note 1)	L0	G	QUADRO Mini-MELF	10K / 13" Reel
	L1			2.5K / 7" Reel

Notes:

1. Whole series with green compound

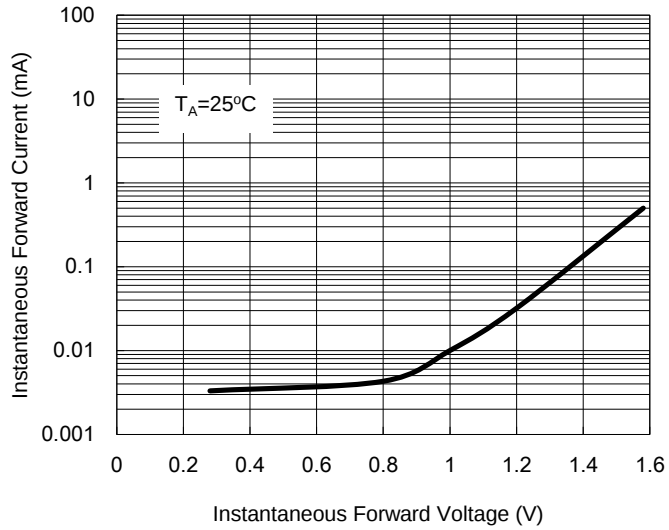
EXAMPLE

EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
LS4148 L0G	LS4148	L0	G	Green compound

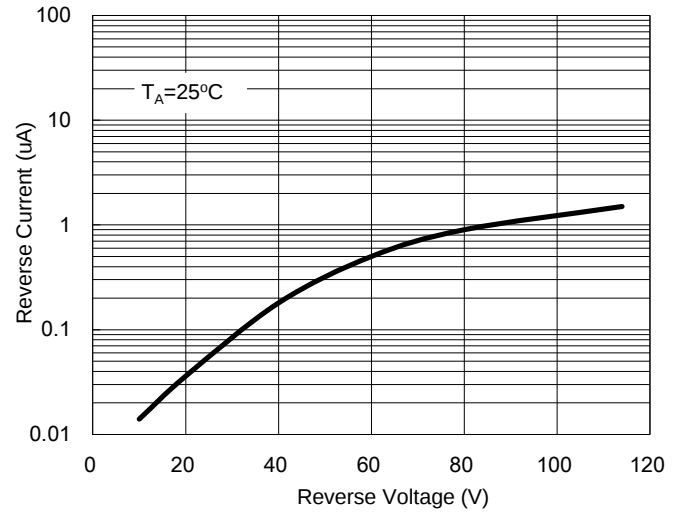
CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

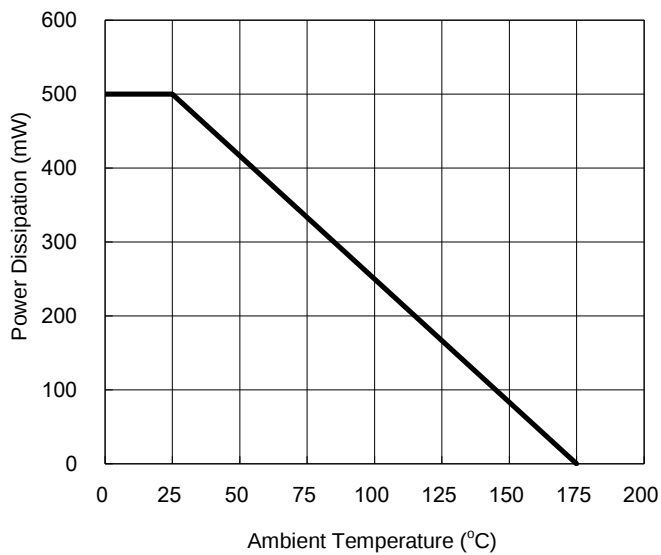
Typical Forward Characteristics



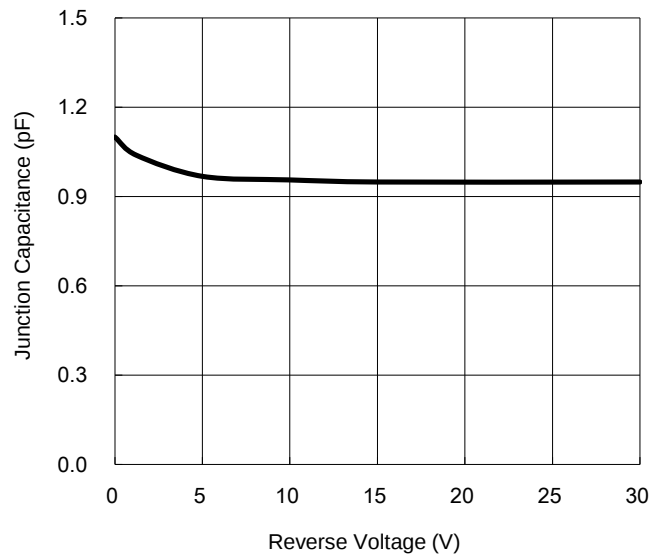
Reverse Current VS. Reverse Voltage



Admissible Power Dissipation Curve

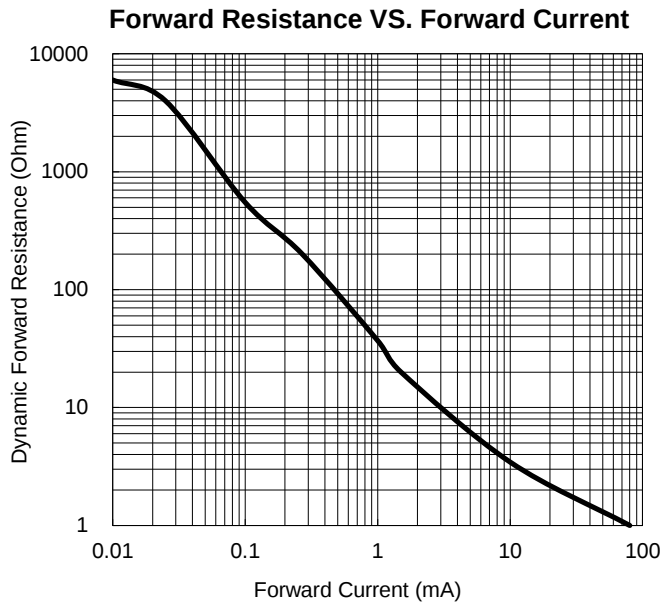


Typical Junction Capacitance

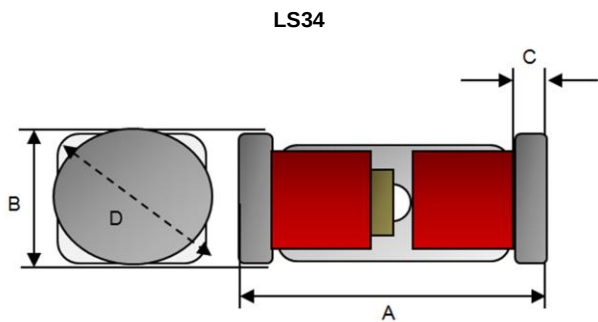


CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

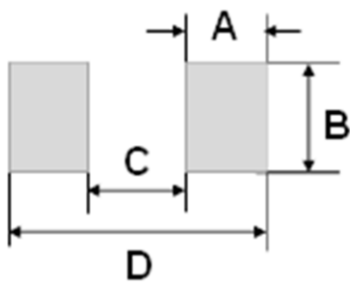


PACKAGE OUTLINE DIMENSION



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	3.30	3.70	0.130	0.146
B	1.40	1.60	0.055	0.063
C	0.20	0.45	0.008	0.018
D	Typ. 1.80		Typ. 0.071	

SUGGEST PAD LAYOUT



DIM.	Unit(mm)	Unit(inch)
	Typ.	Typ.
A	1.25	0.049
B	2.00	0.079
C	2.50	0.098
D	5.00	0.197

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.