

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:

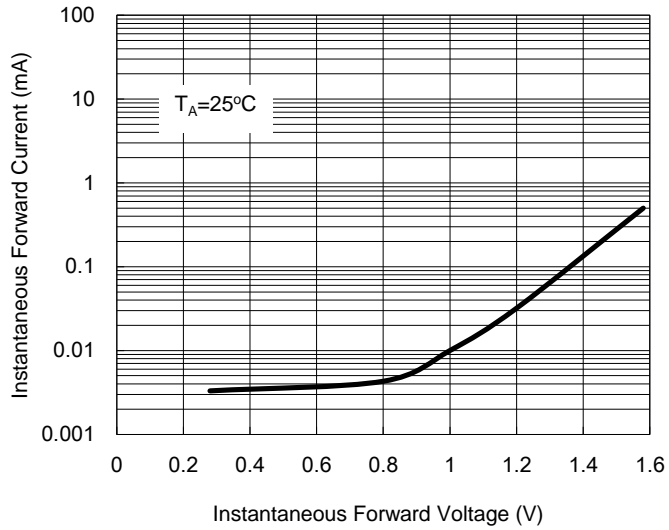
1. Whole series with green compound

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

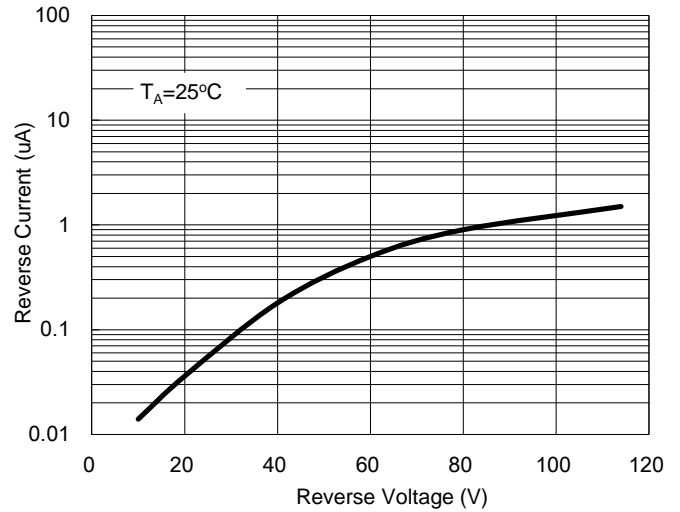
CHARACTERISTICS CURVES

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

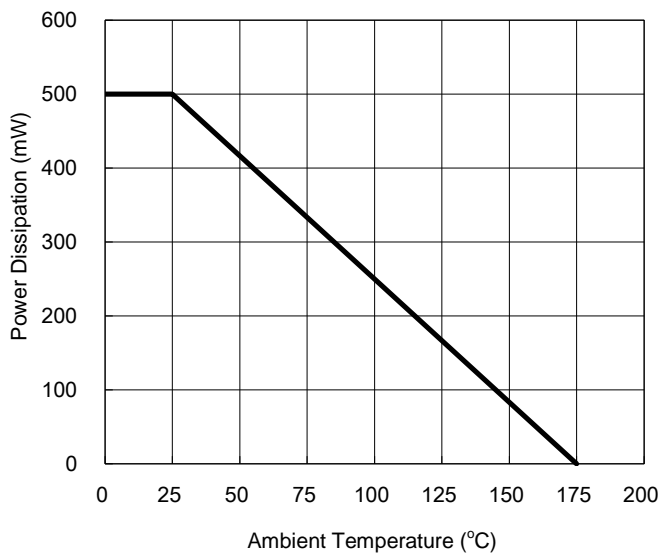
Typical Forward Characteristics



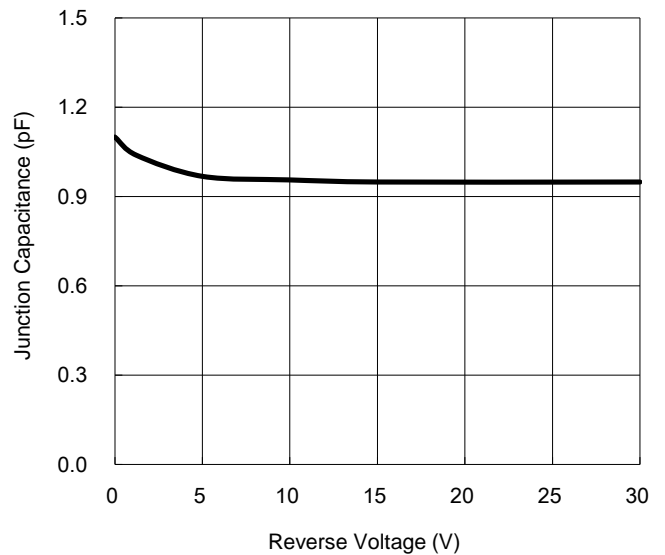
Reverse Current VS. Reverse Voltage



Admissible Power Dissipation Curve

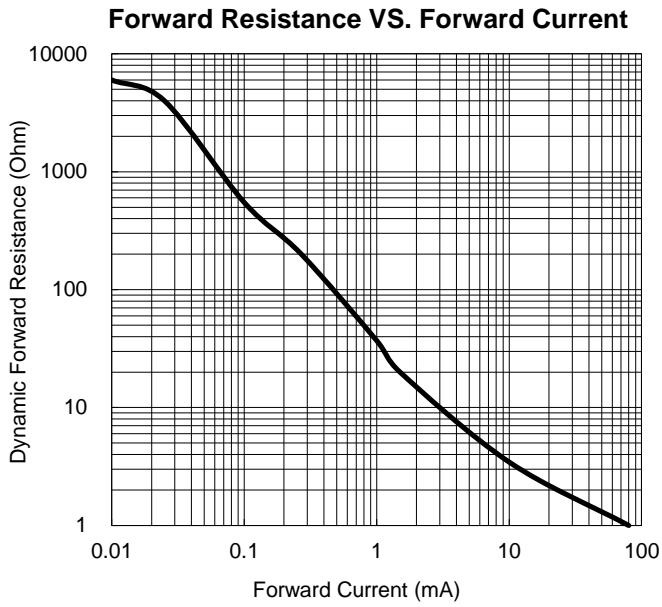


Typical Junction Capacitance

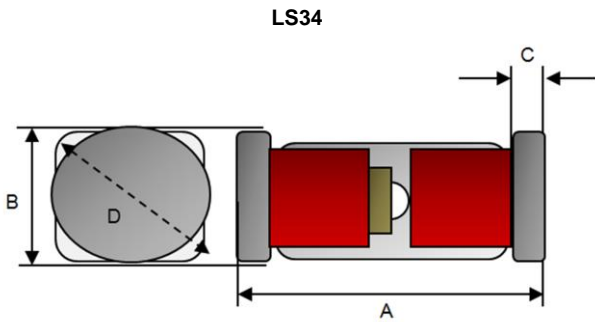


CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

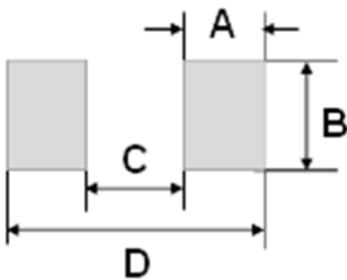


PACKAGE OUTLINE DIMENSION



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