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

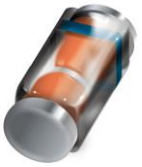
- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- On-board DC/DC converter

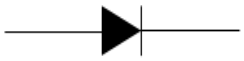
MECHANICAL DATA

- 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	

Pb-Free RoHS COMPLIANT HALOGEN FREE





ABSOLUTE MAXIMUM RATINGS (T_A = 25°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°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**TYP**	**MAX**	**UNIT**
Forward voltage per diode (1)	LS4448, LS914B I_F = 5.0mA, T_J = 25°C	V_F	--	0.72	V
	LS4148 I_F = 10.0mA, T_J = 25°C		--	1.0	
	LS4448, LS914B I_F = 100mA, T_J = 25°C		--	1.0	
Reverse current @ rated V_R per diode (2)	V_R=20V T_J = 25°C	I_R	--	25	nA
	V_R=75V T_J = 25°C		--	5	μA
Junction capacitance	1 MHz, V_R=0V	C_J	--	4	ρF

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 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:

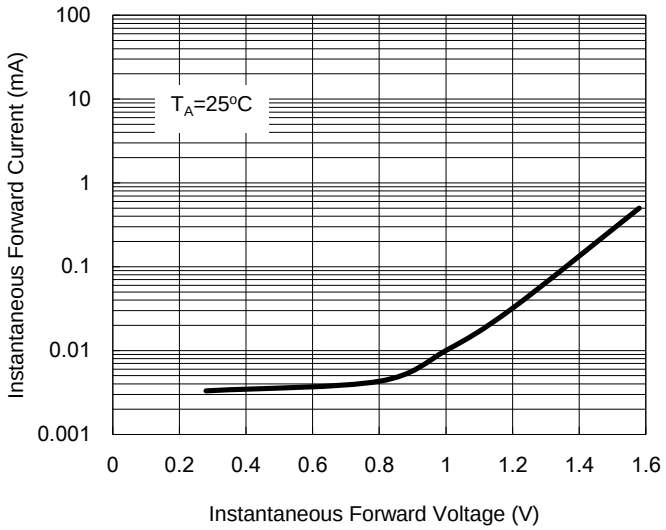
1. Whole series with green compound

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

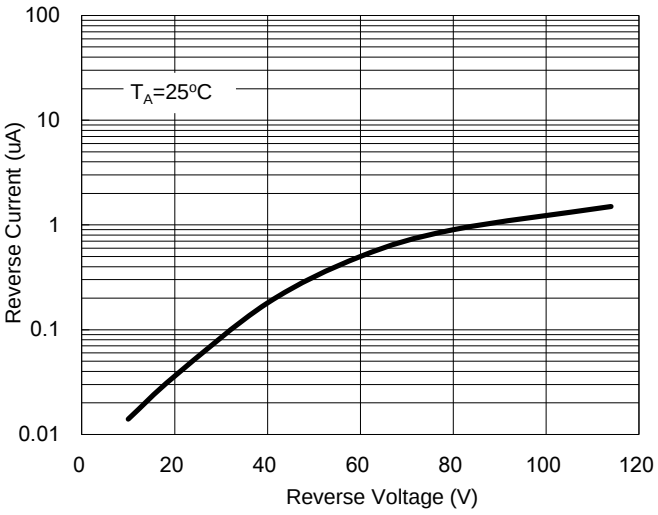
CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

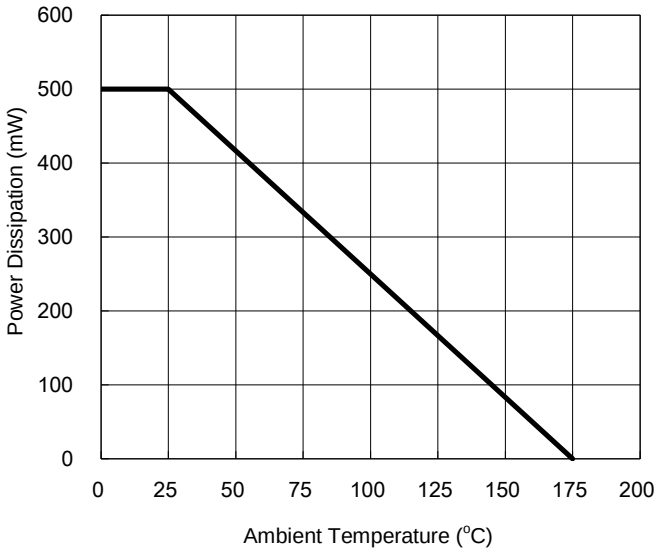
Typical Forward Characteristics



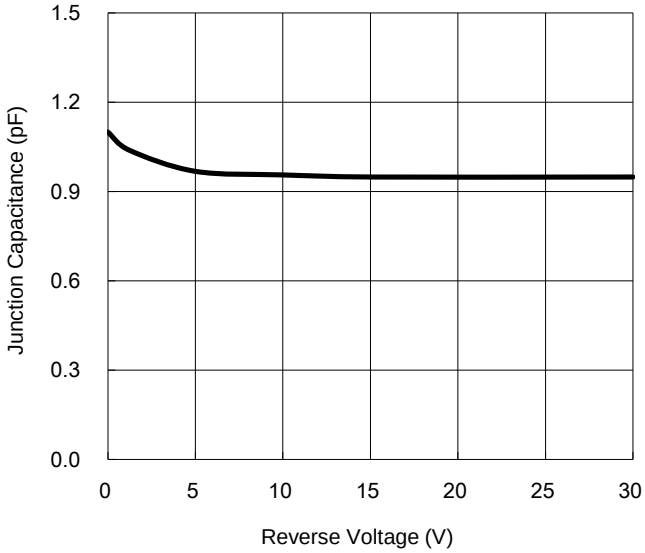
Reverse Current VS. Reverse Voltage



Admissible Power Dissipation Curve

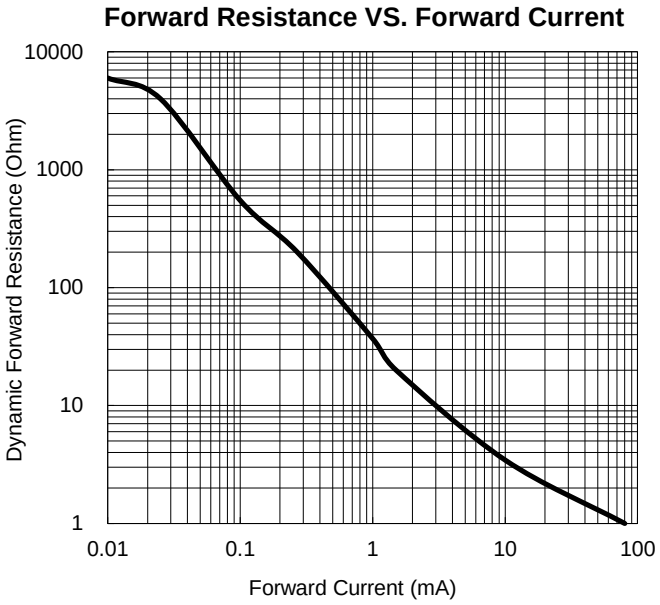


Typical Junction Capacitance



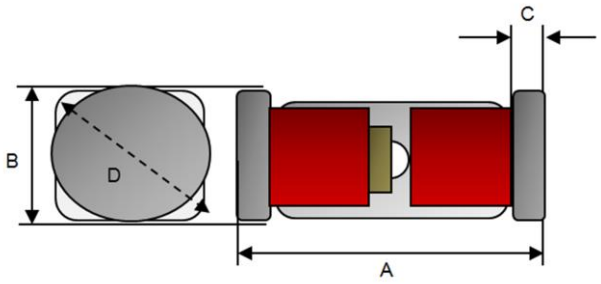
CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)



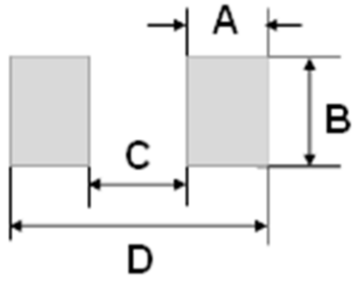
PACKAGE OUTLINE DIMENSION

LS34



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

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