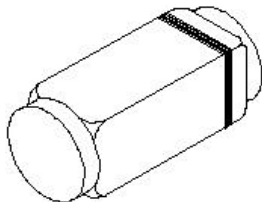


## HIGH SPEED SILICON SWITCHING DIODES

LS4148, LS4448

Quadro MELF (LS-34)



### High Speed Switching Diodes

#### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Continuous Reverse Voltage	$V_R$	75	V
Peak Forward Surge Current $t_p=1ms$	$I_{FSM}$	2	A
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Forward Current	$I_F$	300	mA
Average Forward Current	$I_{FAV}$	150	mA
Power Dissipation up to $T_j=25^\circ C$	$P_D$	500	mW
Junction Temperature	$T_j$	175	$^\circ C$
Storage Temperature Range	$T_{stg}$	- 65 to +175	$^\circ C$

#### THERMAL RESISTANCE

Junction to Ambient	$*R_{th(j-a)}$	500	K/W
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\*Device mounted on a PC board 50mm x 50mm 1.6mm

#### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ unless specified otherwise)

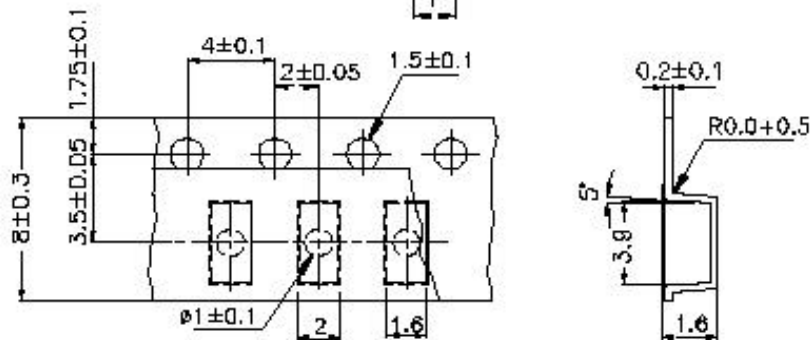
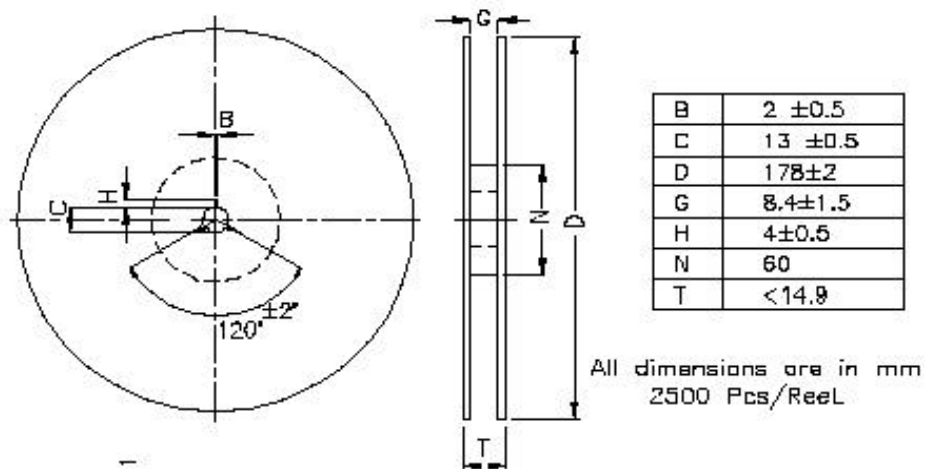
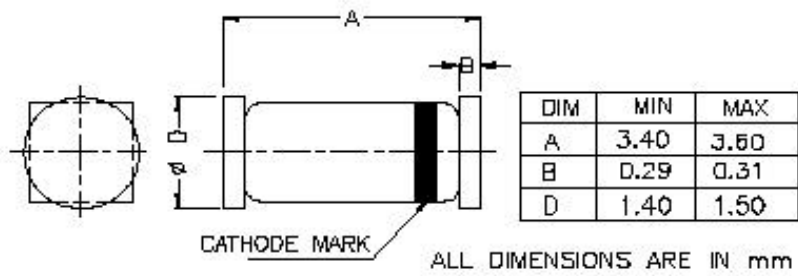
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Forward Voltage	$V_F$	$I_F=5mA$ <b>LS4448</b>	0.62	0.72	V
		$I_F=50mA$ <b>LS4148</b>		1.0	V
		$I_F=100mA$ <b>LS4448</b>		1.0	V
Reverse Current	$I_R$	$V_R=20V$		25	nA
		$V_R=20V, T_j=150^\circ C$		50	$\mu A$
		$V_R=75V$		5.0	$\mu A$
Reverse Breakdown Voltage	$V_{BR}$	$I_R=100\mu A, t_p/T=0.01, t_p=0.3ms$	100		V

#### DYNAMIC CHARACTERISTICS

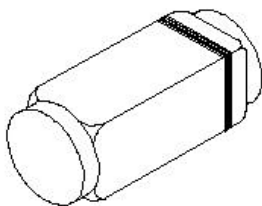
Diode Capacitance	$C_d$	$V_R=0V, f=1MHz, V_{HF}=50mV$		4.0	pF
Rectification Efficiency	$\eta_r$	$V_{HF}=2V, f=100MHz$	45		%
Reverse Recovery Time	$t_{rr}$	$I_F=10mA, to I_R=60mA$ $R_L=100\Omega$ Measured @ $I_R=1mA$		4.0	ns
	$t_{rr}$	$I_F=10mA, to I_R=1mA$		8.0	ns

**LS4148, LS4448**  
**Quadro MELF (LS-34)**

PACKAGE Quadro MELF



Accumulated pitch tolerance is ±0.2 mm over 10 pitches  
 8-mm Carrier tape for Quadro MELF – LS34 PACKAGE  
 All dimensions are in mm



**Component Disposal Instructions**

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

**Customer Notes****Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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