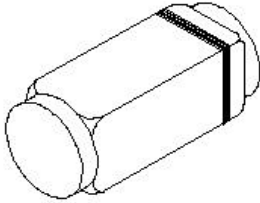


HIGH SPEED SILICON SWITCHING DIODES

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

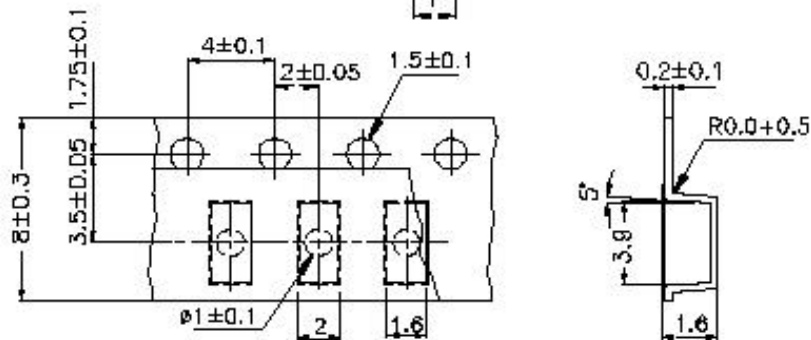
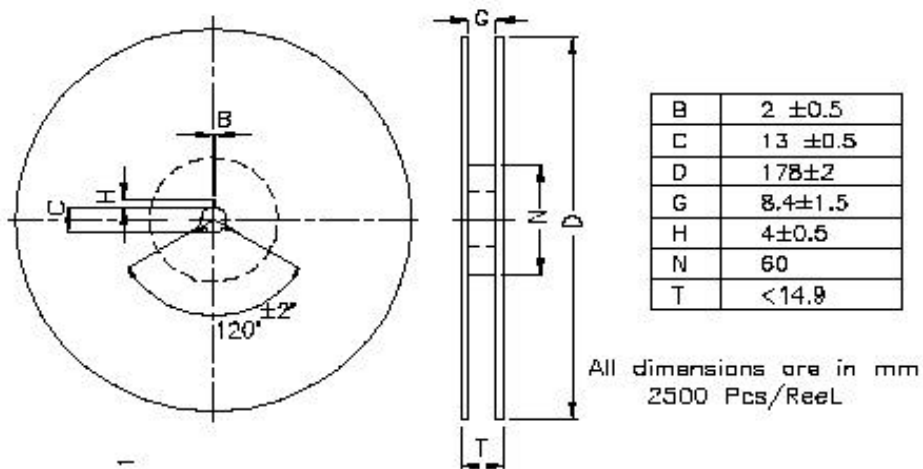
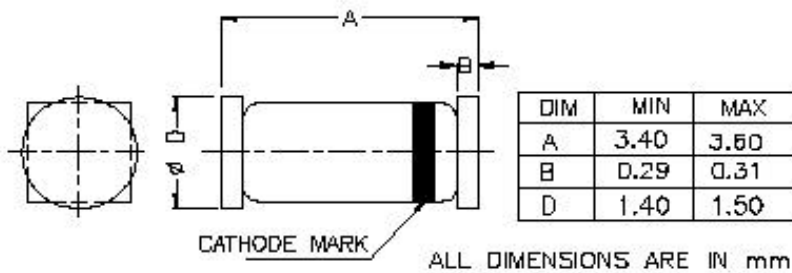
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$ unless specified otherwise)

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

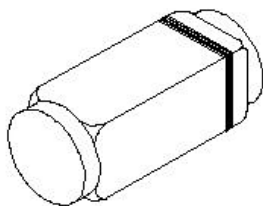
DYNAMIC CHARACTERISTICS

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

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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