

FEATURES

- | Fast Switching Speed
- | Surface Mount Package Ideally Suited for Automatic Insertion
- | For General Purpose Switching Applications
- | High Conductance
- | Meet AEC-Q101 Requirements



DO-35

APPLICATIONS

- | High-speed switching
- | This diode is also available in MiniMELF case with the type designation LL4148

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_{RMS}	75	V
Average Rectified Forward Current	$I_{F(AV)}$	0.2	A
Non-repetitive Peak Forward Surge Current	I_{FSM}	0.5	A
		1.0	A
		4.0	A
Power Dissipation	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_J	200	°C
Storage Temperature Range	T_{STG}	-65 to 200	°C

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 10\text{ mA}$	V_F		1	V
Leakage Current at	I_R		25	nA
			5	μA
			50	μA
Reverse Breakdown Voltage at	$V_{(BR)R}$	100		V
		75		V
Capacitance at $V_R = 0, f = 1\text{ MHz}$	C_{tot}		4	pF
Voltage Rise when Switching ON tested with 50 mA Forward Pulses $t_p = 0.1\text{ s}$, Rise Time $< 30\text{ ns}$, $f_p = 5\text{ to }100\text{ KHz}$	V_{fr}		2.5	V
Reverse Recovery Time at $I_F=10\text{mA}$ to $I_R=1\text{mA}$, $V_R=6\text{V}$, $R_L=100\Omega$	t_{rr}		4	ns
Thermal Resistance Junction to Ambient Air	R_{thA}		0.35 ¹⁾	K/mW
Rectification Efficiency at $f = 100\text{ MHz}$, $V_{RF}=2\text{V}$	η_v	0.45		

CHARACTERISTIC CURVES

Fig.1 Forward characteristics

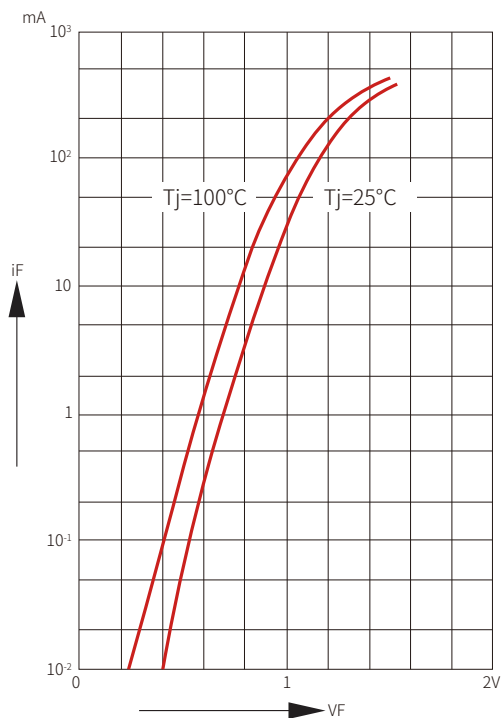


Fig.2 Dynamic forward resistance versus forward current

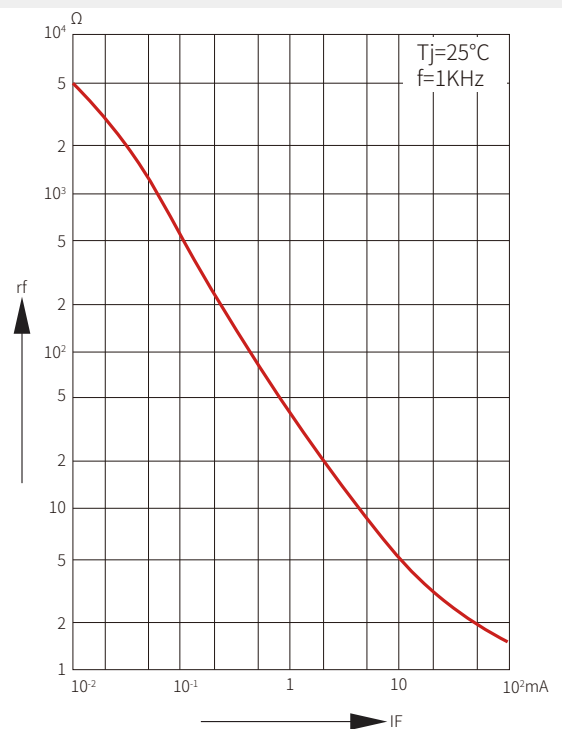


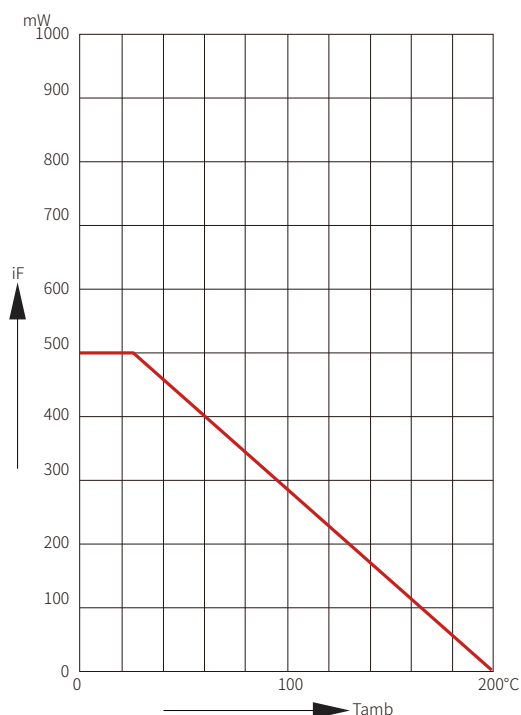
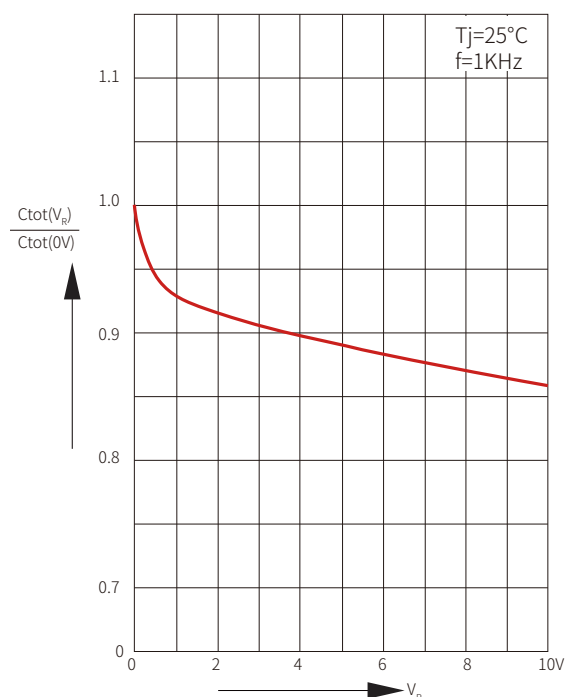
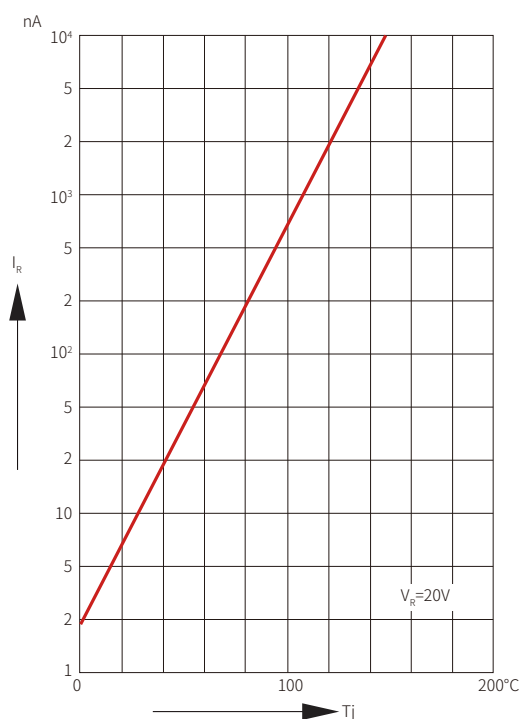
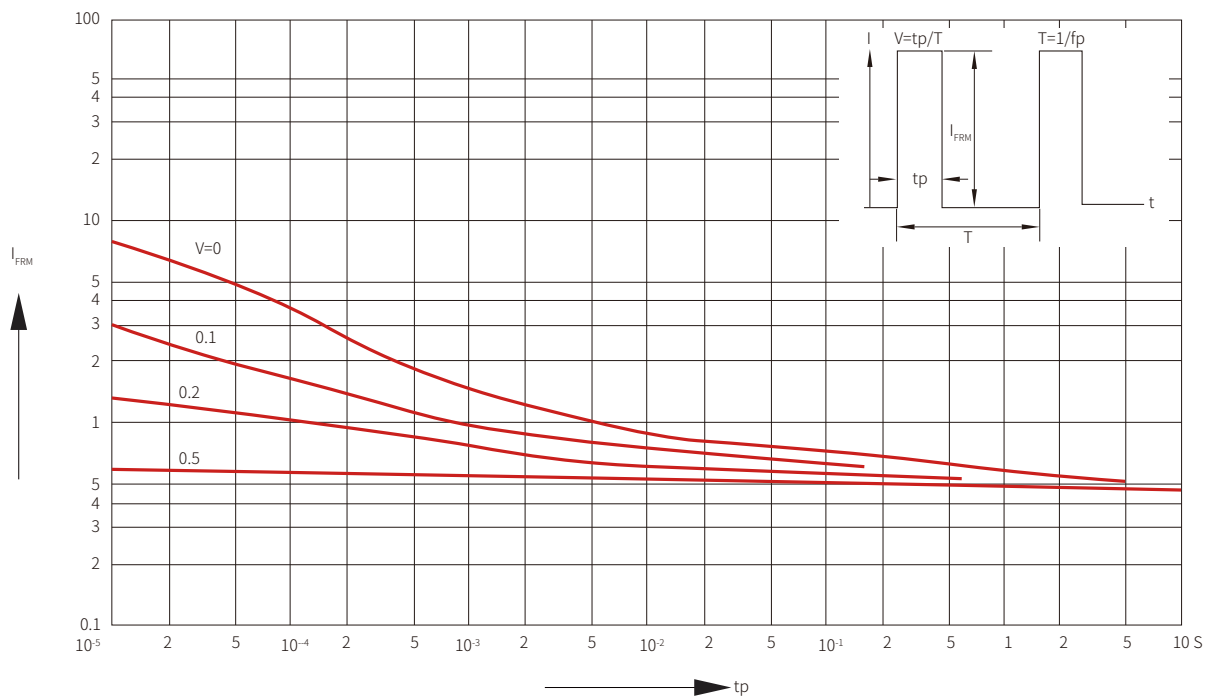
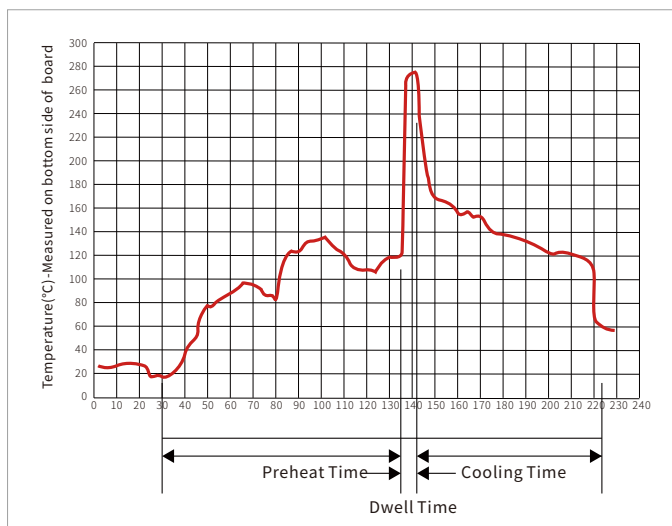
Fig.3 Admissible power dissipation versus ambient temperature

Fig.4 Relative capacitance versus reverse voltage

Fig.5 Leakage current versus junction temperature


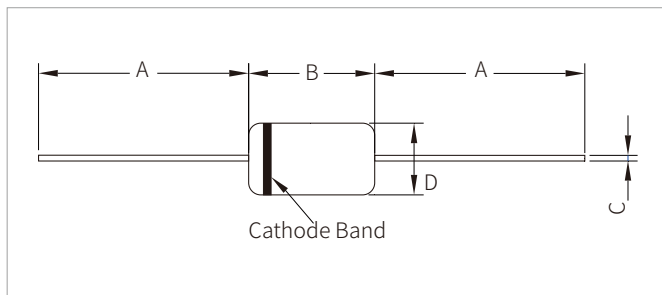
Fig.6 Admissible repetitive peak forward current versus pulse duration


WAVE SOLDERING



Wave Parameter		Lead-free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

DO-35 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.40	-	1.00	-
B	-	3.35	-	0.132
C	-	0.43	-	0.017
D	-	1.70	-	0.067

ORDERING INFORMATION

Part Number	Marking	Component Package	Per Carton	Description
1N4148Q	1N4148	DO-35	5000pcs	Box

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