

1N4148

FEATURES

- Silicon Epitaxial Planer Diode
- Fast Switching speed
- General purpose switching application
- Also available in the SOD-123 package as the 1N4148W, and the Quadro MELF as the LS4148, and the Mini-MELF as the LL4148



DO-35



MECHANICAL DATA

Case	DO-35 Glass case
Terminals	Plated axial leads, solderable per MIL-STD-202E, Method 208C
Polarity	Color band denotes cathode end
Mounting position	Any
Weight	0.0045 Ounce, 0.13 gram, approx

MAXIMUM RATINGS (T_{Ambient}=25°C unless noted otherwise)

Parameter	Conditions	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage		V _{RRM}	100	V
Max Repetitive Peak Reverse Voltage		V _{RMS}	75	V
Forward Continuous Current		I _{FM}	300	mA
Max Reverse Recovery Time	I _F = 10mA, I _R =10mA, I _{RR} =1mA, R _L =100Ω	T _{rr}	4	ns
Non-Repetitive Peak Forward Surge Current	T=1.0μS, T=1.0S	I _{FSM}	4	Amps
Power dissipation (Note1)		P _{TOT}	500	mW
Operating and Storage Temperature		T _J , T _{STG}	-65 to +175	°C

ELECTRICAL CHARACTERISTICS (T_{Ambient}=25°C unless noted otherwise)

Parameter	Conditions	Symbol	Value	Unit
Max Instantaneous Forward Voltage	10mA	V _F	1.0	V
Max DC Reverse Current at Rated DC Blocking Voltage	V _R =75V V _R =20V, T _J =150°C V _R =20V	I _R	5.0 50 25	mA
Typical Junction Capacitance	V _f =1V, f=1MHZ	C _J	4.0	pF
Typical Thermal Resistance		R _{θJA}	350	°C/W

Note : (1) Valid provided leads at a distance of 0.31" (8mm) from case are kept at ambient temperature

TYPICAL CHARACTERISTICS CURVES

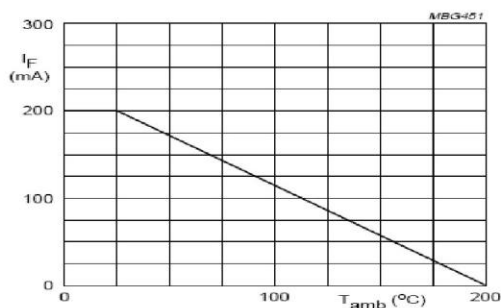
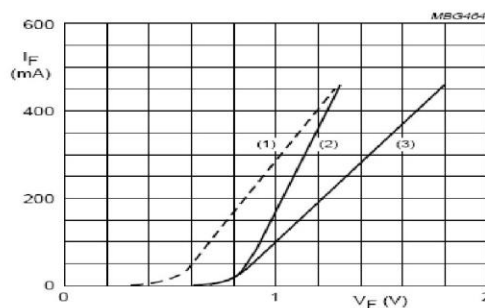
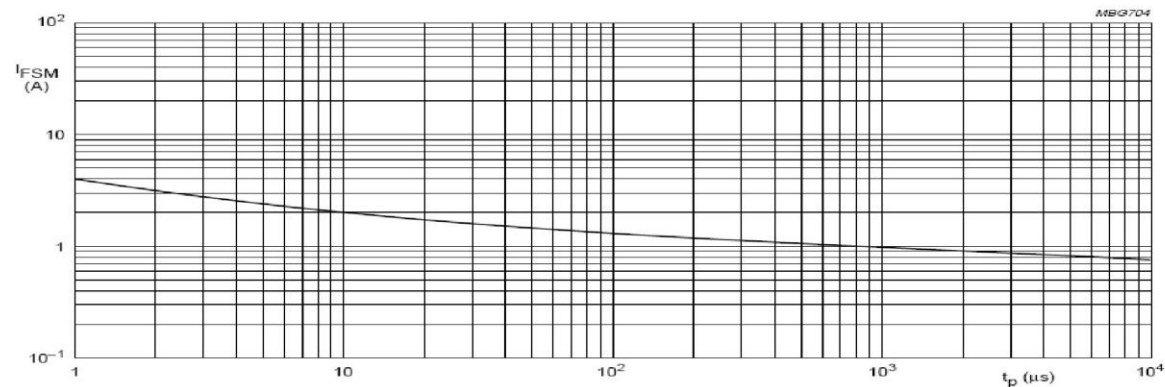


Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



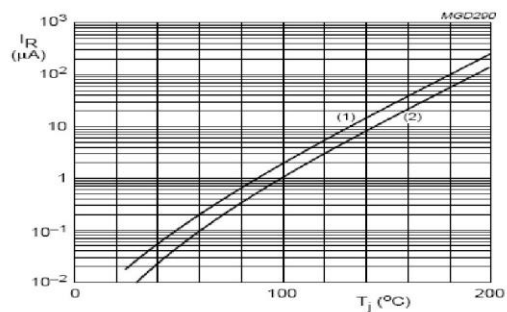
- (1) $T_j = 175\text{ }^{\circ}\text{C}$; typical values.
 (2) $T_j = 25\text{ }^{\circ}\text{C}$; typical values.
 (3) $T_j = 25\text{ }^{\circ}\text{C}$; maximum values.

Fig.3 Forward current as a function of forward voltage.



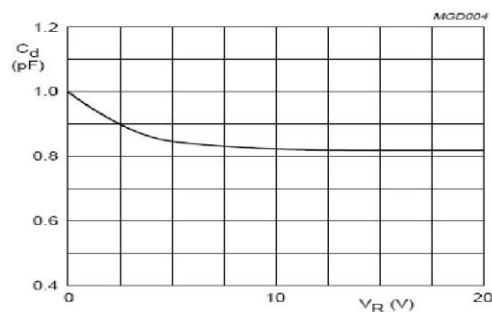
Based on square wave currents.
 $T_j = 25\text{ }^{\circ}\text{C}$ prior to surge.

Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.



- (1) $V_R = 75\text{ V}$; typical values.
 (2) $V_R = 20\text{ V}$; typical values.

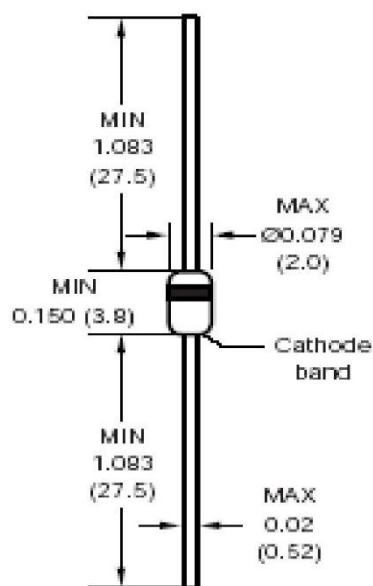
Fig.5 Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$; $T_j = 25\text{ }^{\circ}\text{C}$.

Fig.6 Diode capacitance as a function of reverse voltage; typical values.

DIMENSIONS in inch (mm)



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