Small Signal
Fast Switching Diode

Features

- Silicon epitaxial planar diode
- High speed switching diode
- 500mW power dissipation

Mechanical Data

Case : Mini-MELF glass case
Polarity : Colour band denotes cathode
Weight : Approx. 0.05 grams
Reverse Voltage : 75 Volts
Forward Current : 0.15 Ampere

Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.
Maximum Ratings

Characteristics	Symbol	Values	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Average Forward Rectified Current Half Wave Rectification with Resist .load at Tamb = 25°C and f ≧ 50HZ	Io	150	mA
Forward Surge Current at t < 1s and T_J = 25°C	I_{FSM}	500	mA
Power Dissipation at Tamb = 25°C	P_{tot}	500(1)	mW
Junction Temperature	T_J	175	°C
Storage Temperature Range	T_{STG}	-65 to +175	°C
Note:(1) Valid provided that electrodes are kept at ambient temperature.			

Electrical Characteristics	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at I_F = 10mA	V_F				V
Leakage Current at V_R = 20V at V_R = 75V at V_R = 20V T_J = 150°C	 I_R I_R I_R	 - - -	 - - -	 25 5 50	 nA µA µA
Capacitance at V_F = V_R = 0V	C_{tot}	-	-	4	pF
Voltage Rise When Switching ON Tested With 50mA Pulses tp = 0.1us. Rise Time<30ns.fp = 5 to 100Hz	V_{fr}	-	-	2.5	V
Reverse Recovery Time From I_F = 10mA V_R = 6V. RL = 100Ω at I_R = 1mA	trr	-	-	4	nS
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	-	-	350(1)	°C/W
Rectification Effciency at 100MHz V_{RF} = 2V	nV	0.45	-	-	-
Note:(1) Valid provided that electrodes are kept at ambient temperature.					

Ratings and Characteristic Curves

FLG.1-ADMISSIBLE POWER DISSIPATION
VERSUS AMBIENT TEMPERATURE

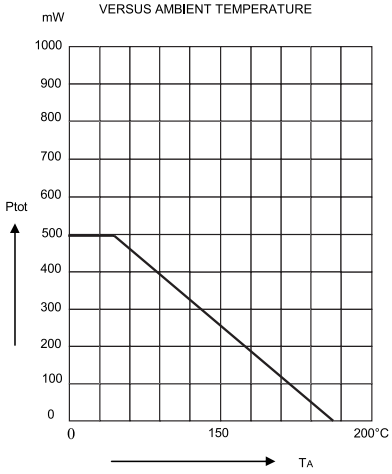
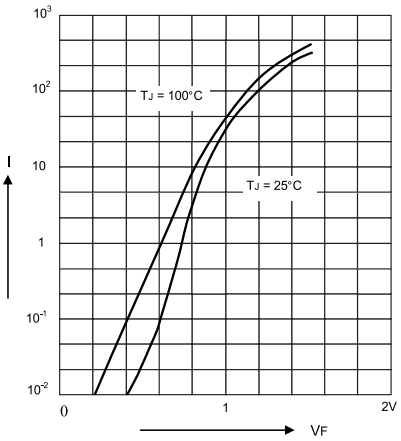


FIG.2-FORWARD CHARACTERISTICS



FLG.3-ADMISSIBLE REPETITVE PEAK FORWARD CURRENT VERSUS PULSE DURATION

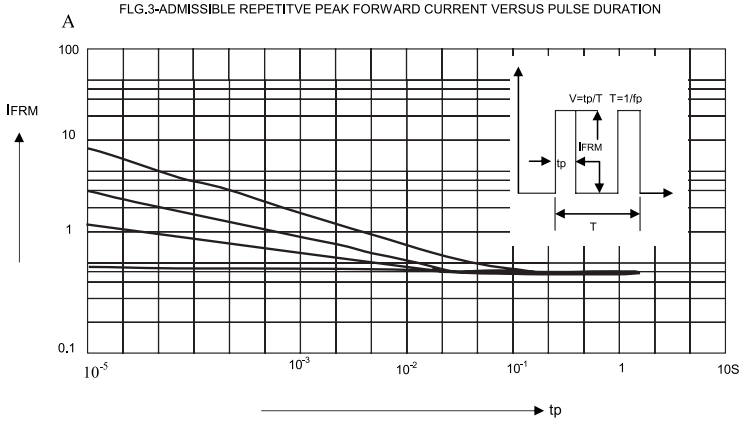


FIG.4-RECTIFICATION EFFICIENCY
MEASUREMENT CIRCUIT

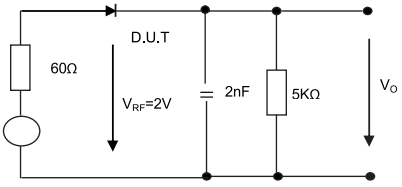


FIG.5-RELATIVE CAPACITANCE
VERSUS VOLTAGE

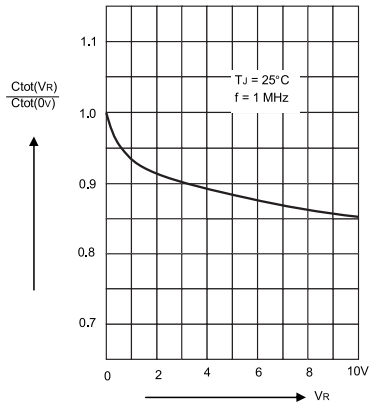


FIG.6-LEAKAGE CURRENT VERSUS
JUNCTION TEMPERATURE

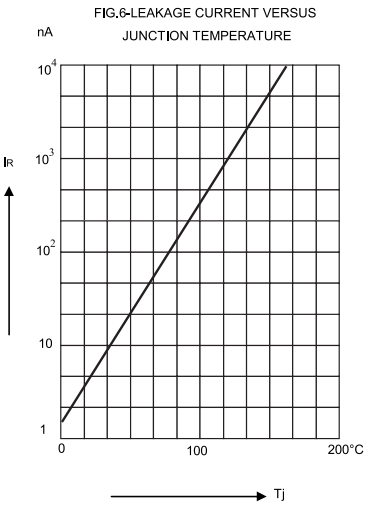


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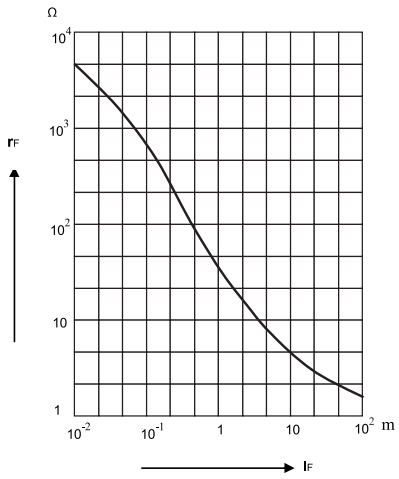
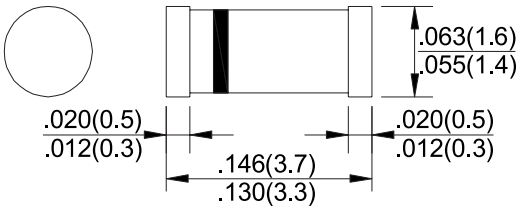
FIG.7-DYNAMIC FORWARD RESISTANCE
VERSUS FORWARD CURRENT



Dimensions:

DL - 35



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Small Signal Fast Switching Diode	LL4148+