

Features

- Small Surface Mounting Type
- Low Power Losses, High Efficiency
- Low current leakage
- Reverse voltage: 40V
- Average forward current: 1A
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101



DFN1608-2L

Mechanical Characteristics

- Package: DFN1608-2L
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking Code: R



Pin Configuration(Top view)

Application

- Fast switching speed
- For general purpose switching applications

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Unit	Value
Repetitive peak reverse voltage	V_{RRM}	V	40
Forward current	I_F	A	1
Repetitive peak forward current @ $t_p \leq 1 \text{ ms}$; $\delta \leq 0.25$	I_{FRM}	A	3
Non-Repetitive Surge peak forward current @ $t=8.3\text{ms}$ half-sine wave	I_{FSM}	A	5
Power Dissipation	P_D	mW	410
Thermal resistance, junction-to-ambient	$R_{\theta JA}^{(1)}$	$^{\circ}\text{C}/\text{W}$	245
Thermal resistance, junction-to-case	$R_{\theta JC}^{(1)}$	$^{\circ}\text{C}/\text{W}$	200
Junction temperature	T_J	$^{\circ}\text{C}$	-55 to +125
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +150

Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint

Electrical Characteristics (T_A=25°C, unless otherwise noted)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V _R	V	I _R =10uA	40		
Forward Voltage	V _F	mV	I _F =100mA			390
			I _F =500mA			500
			I _F =700mA			550
			I _F =1A			600
Reverse Leakage Current	I _R	uA	V _R =10V			4
			V _R =40V			20
Capacitance	C	pF	V _R =1V, f=1MHz			60
			V _R =10V, f=1MHz			25
Reverse Recovery Time	T _{rr}	ns	I _F =I _R =0.5A, I _{rr} =0.1A		15	25

Typical Characteristics

Fig 1: P_D-T_a Curve

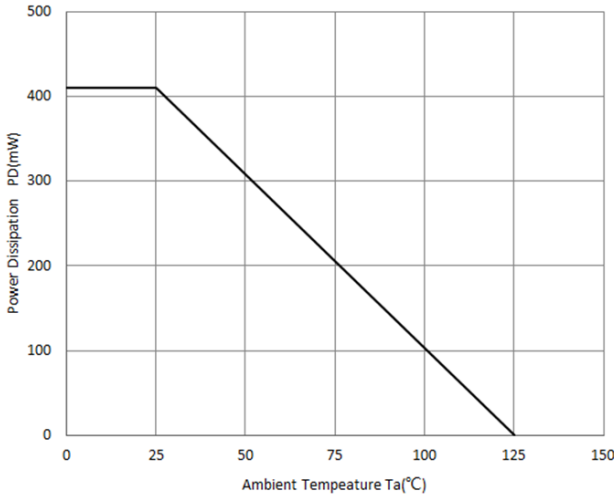


Fig 2: Capacitance Capability

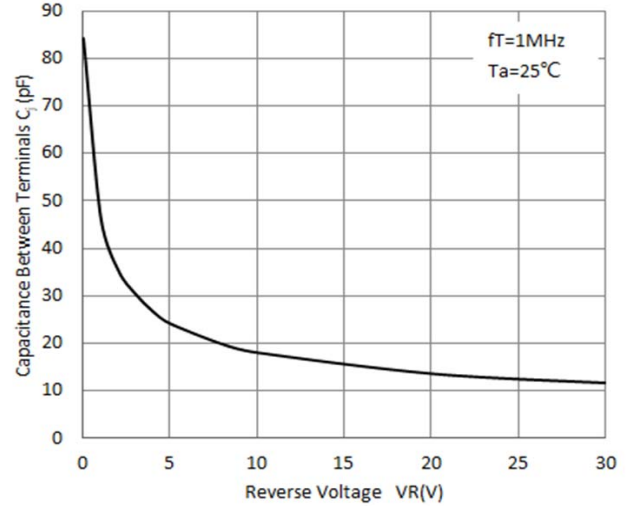


Fig 3: Typical Forward Characteristics

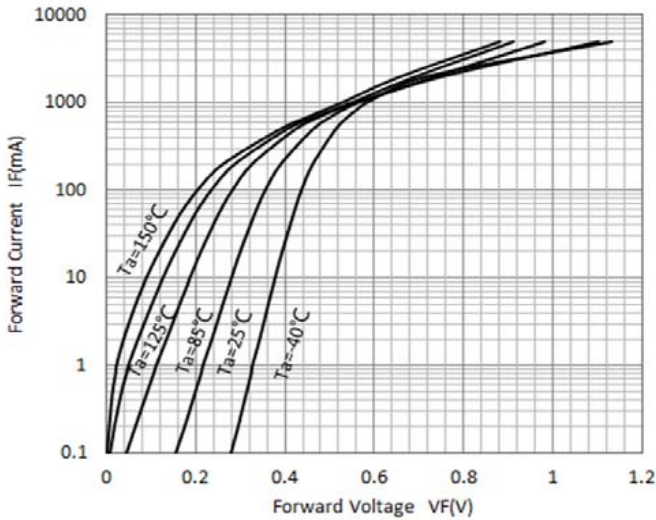
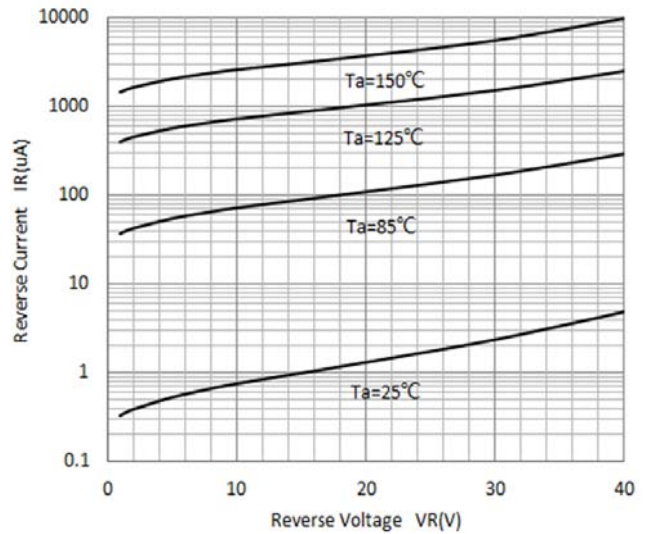
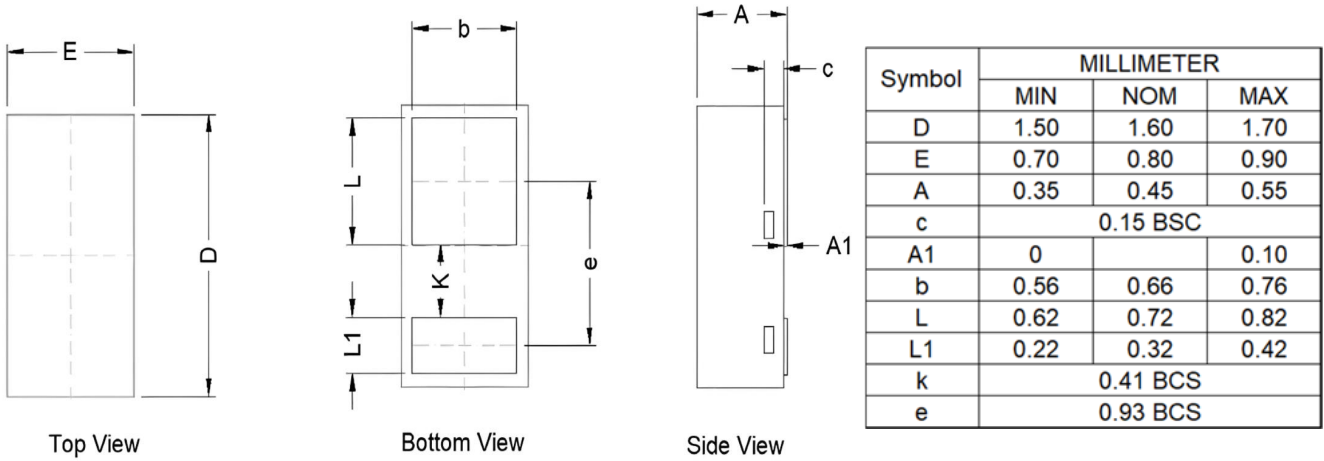


Fig 4: Typical Reverse Characteristics



Package Outline Dimensions



Suggested Solder Pad Layout

