

Features

- Reverse voltage: 30V
- Average forward current: 200mA
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

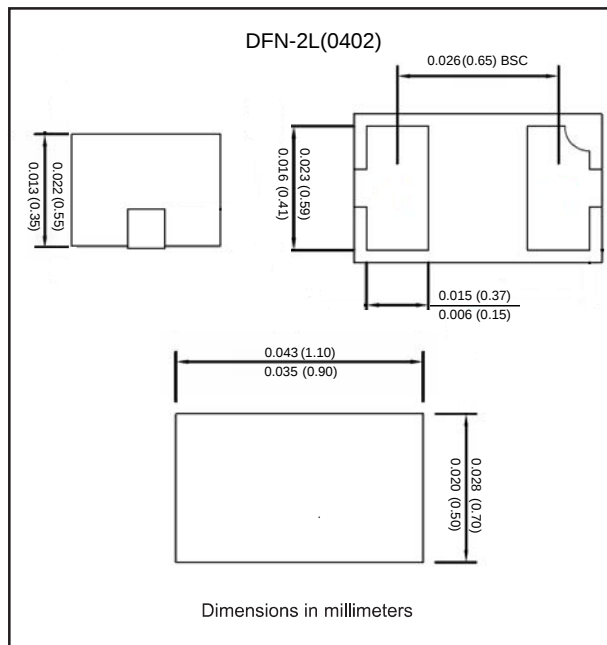
Application

- Ultra-Small Surface Mount Package
- Low Forward Voltage Drop
- Extremely Fast Switching Speed

Mechanical data

- **Package:** DFN-2L (0402)
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

Package outline



Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Repetitive peak reverse voltage	V_{RRM}	V	30
RMS Reverse Voltage	V_{RMS}	V	21
Maximum DC Blocking Voltage	V_{DC}	V	30
Forward current	I_F	mA	200
Repetitive Peak Forward Current@ $t_p=1\text{ms}$, $\delta=0.25$	I_{FRM}	mA	300
Non-repetitive surge peak forward current @ $t=8.3\text{ms}$ half-sine wave	I_{FSM}	mA	600
Power dissipation	P_D	mW	160
Junction temperature	T_J	$^{\circ}\text{C}$	-55 to +125
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +125

Electrical Characteristics (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse breakdown voltage	V _{BR}	V	I _R =0.1mA	30		
Reverse leakage current	I _R	uA	V _R =25V			2
Forward voltage	V _F	mV	I _F =0.1mA			240
			I _F =1mA			320
			I _F =10mA			400
			I _F =30mA			500
			I _F =100mA			1000
Capacitance	C _J	pF	V _R =1.0V, f=1MHz		10	
Reverse Recovery Time	t _{rr}	ns	I _F =10mA, I _R =1~10mA, R _L =100Ω,		5	

Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	RθJ-A	°C/W	625

Characteristics

Fig 1: P_D -Ta Curve

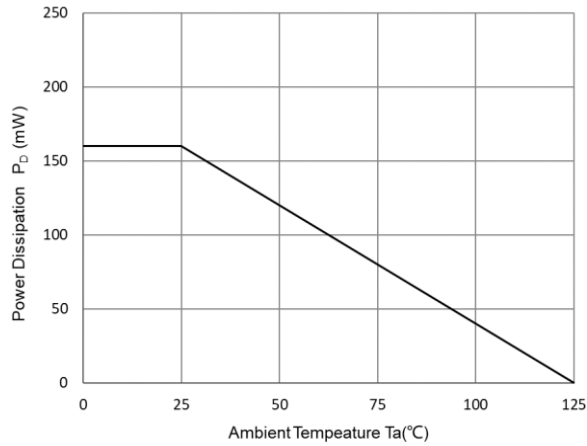


Fig 2: Capacitance Capability

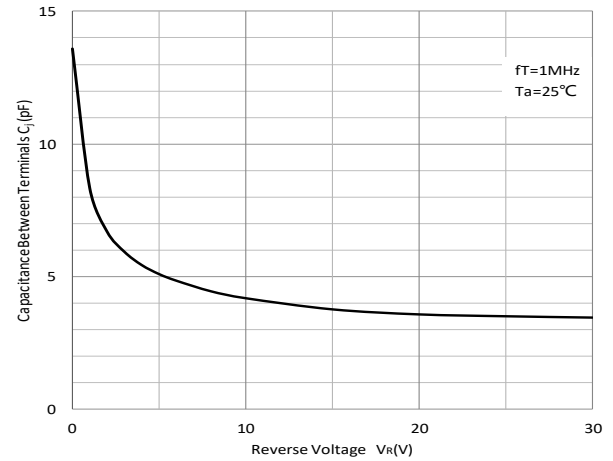


Fig 3: Typical Forward Characteristics

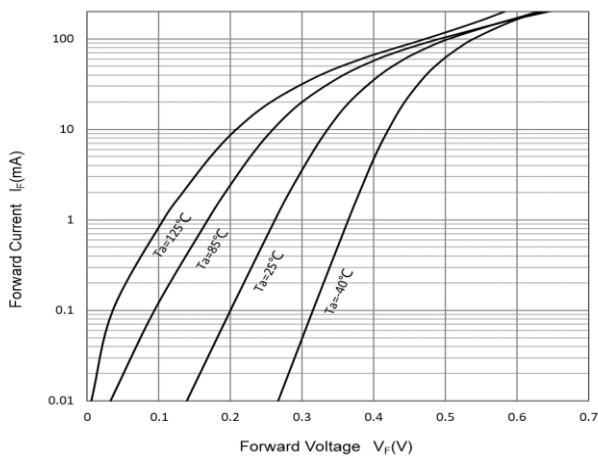
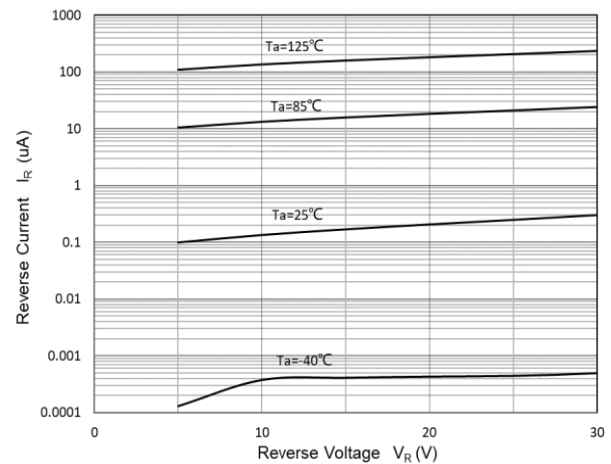


Fig 4: Typical Reverse Characteristics



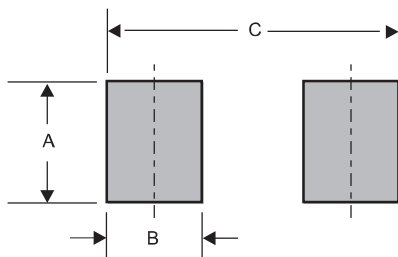
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
BAT54D1-Q1	L91

Suggested solder pad layout



Dimensions in millimeters

PACKAGE	A	B	C
DFN-2L(0402)	0.024(0.60)	0.014(0.35)	0.039(1.00)