

B0540W

Schottky Rectifier



Features

- Moisture sensitivity level 1
- Reverse voltage: 40V
- Average forward current : 0.5A

Application

- High frequency and low voltage rectifier

Mechanical data

- **Package:** SOD-123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

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

Parameter	Symbol	Unit	Value
Device marking code			R41
Repetitive peak reverse voltage	V_{RRM}	V	40
Forward current	I_F	A	0.5
Non-repetitive surge peak forward current @ $t=8.3\text{ms}$ half-sine wave	I_{FSM}	A	5.5
Non-repetitive surge peak forward current @ $t=1\text{ms}$ square wave			10
Power dissipation	P_D	mW	410
Junction temperature	T_J	$^{\circ}\text{C}$	-55 to +150
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +150

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

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V _R	V	I _R =20uA	40		
Forward voltage	V _{F1}	V	I _F =0.5A			0.51
	V _{F2}	V	I _F =1A			0.62
Reverse leakage current	I _{R1}	uA	V _R =20V			10
	I _{R2}	uA	V _R =40V			20
Junction capacitance	C _j	pF	V _R =4V, f =1MHZ		30	

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	305
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	244

Note:

(1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas

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■ Characteristics

Fig 1: P_D -Ta Curve

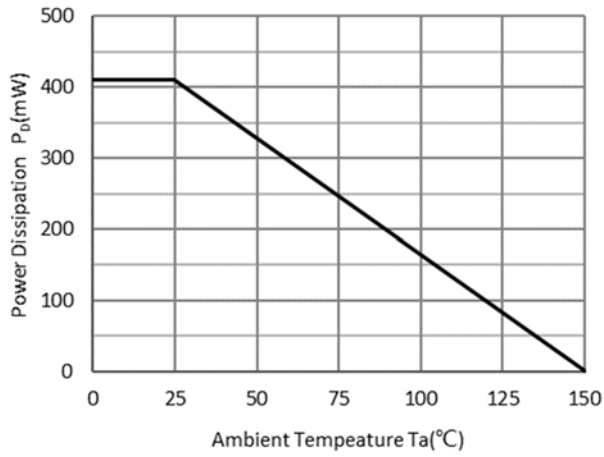


Fig 2: Capacitance Capability

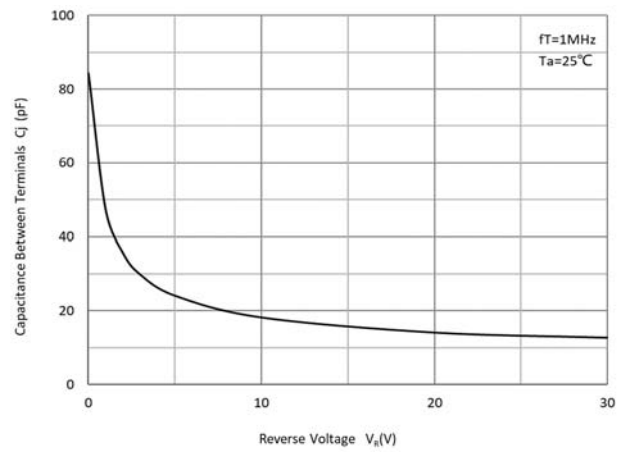


Fig 3: Typical Forward Characteristics

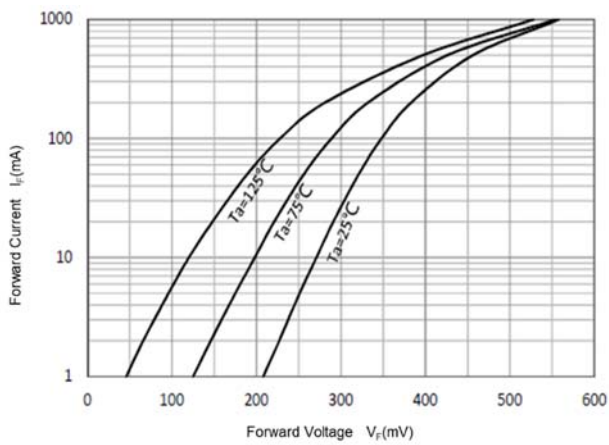
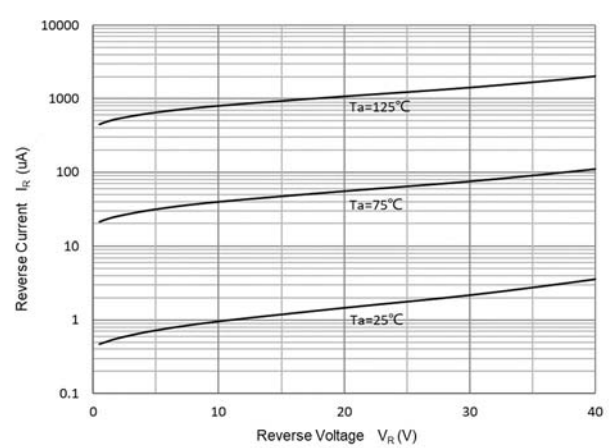


Fig 4: Typical Reverse Characteristics

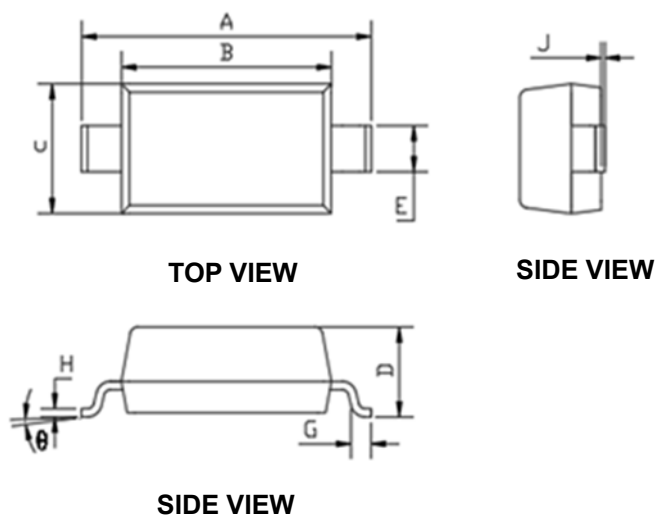


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■ Ordering Information

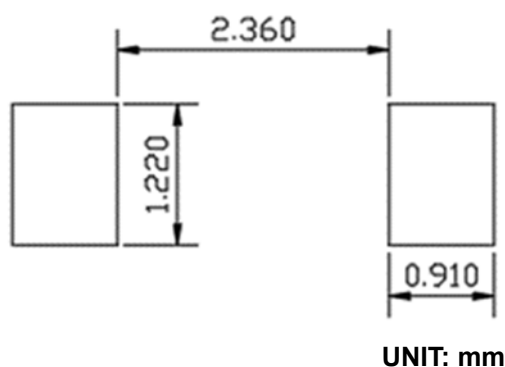
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
B0540W	F2	Approximate 0.011	3000	30000	120000	7" reel
B0540W	F3	Approximate 0.011	10000	/	210000	13" reel

■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
θ	0	8°	0	8°

■ Suggested Pad Layout



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