RB501V-40

Diodes

Shottky barrier diode

RB501V-40

Application

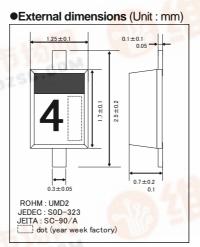
Low current rectification

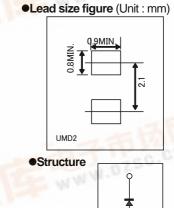
Features

- 1) Ultra Small mold type. (UMD2)
- 2) Low IR
- 3) High reliability.

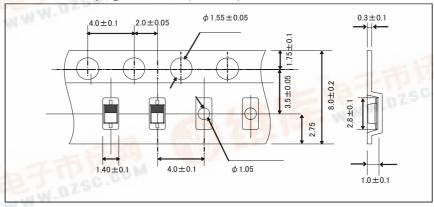
Condtruction

Silicon epitaxial planer





● Taping dimensions (Unit: mm)



● Absolute maximum ratings (Ta=25°C)

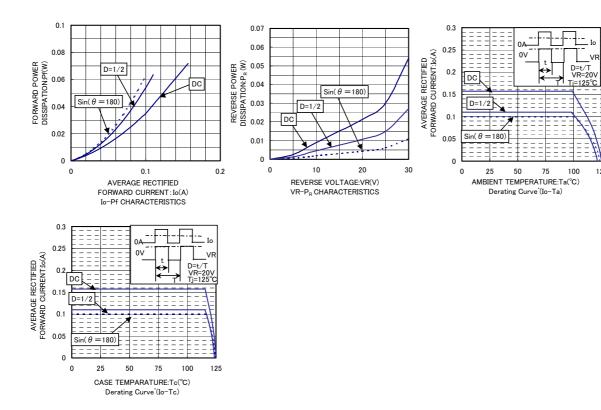
Parameter	Symbol	Limits	Unit	
Reverse voltage (repetitive peak)	V_{RM}	45	V	
Reverse voltage (DC)	V_R	40	V	
Average rectified forward current	lo	100	mA	
Forward current surge peak (60Hz • 1cyc)	I _{FSM}	1	Α	
Junction temperature	Tj	125	°C	
Storage temperature	Tstg	-40 to +125	°C	

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	V _F 1	-	-	0.55	V	I _F =100mA
	V _F 2	1	-	0.34	V	I _F =10mA
Reverse current	I _R	1	-	30	μA	V _R =10V
Capacitance between terminals	Ct	-	6.0	-	pF	V _R =10V , f=1MHz



●Electrical characteristic curves (Ta=25°C) 10000 100 Ta=125°C CAPACITANCE BETWEEN TERMINALS:Ct(pF) ⊡ 1000 FORWARD CURRENT:IF(mA) REVERSE CURRENT: IR(uA) 10 100 10 0.1 0.1 0.01 0.01 0 400 0 10 15 20 REVERSE VOLTAGE: VR(V) VR-IR CHARACTERISTICS REVERSE VOLTAGE:VR(V) VR-Ct CHARACTERISTICS FORWARD VOLTAGE: VF(mV) VF-IF CHARACTERISTICS 470 Ta=25°C Ta=25°C Ta=25°C IF=100m FORWARD VOLTAGE:VF(mV) IF=10mA VR=10V 460 FORWARD VOLTAGE:VF(mV) 300 REVERSE CURRENT:IR(uA) n=10pcs n=30pcs 20 450 290 440 280 10 430 AVE:2.548uA AVE:439.5mV 420 260 VF DISPERSION MAP IR DISPERSION MAP VF DISPERSION MAP 20 Ta=25°C IF=0.5A Ta=25°C RESERVE RECOVERY TIME:trr(ns) PEAK SURGE FORWARD CURRENT:IFSM(A) 25 16 CAPACITANCE BETWEEN TERMINALS:Ct(pF) IR=1A 15 IR=10V 14 20 n=10pcs 12 10 10 AVE:5.50A 2 AVE:6.20ns Ct DISPERSION MAP IFSM DISRESION MAP trr DISPERSION MAP 1000 TRANSIENT THAERMAL IMPEDANCE:Rth (°C/W) PEAK SURGE FORWARD CURRENT.IFSM(A) PEAK SURGE FORWARD CURRENT:IFSM(A) 10 0 0.1 0.001 1000 NUMBER OF CYCLES TIME:t(ms) IFSM-t CHARACTERISTICS $\begin{array}{c} \text{TIME:t(s)} \\ \text{Rth-t CHARACTERISTICS} \end{array}$ IFSM-CYCLE CHARACTERISTICS



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