Shottky barrier diode

RB501V-40

Application

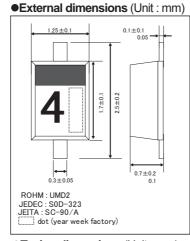
Low current rectification

Features

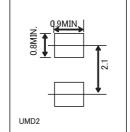
- 1) Ultra Small mold type. (UMD2)
- 2) Low IR
- 3) High reliability.

●Condtruction

Silicon epitaxial planer



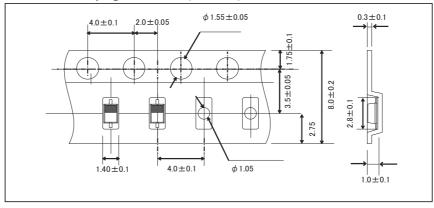
●Lead size figure (Unit : mm)



Structure







• Absolute maximum ratings (Ta=25°C)

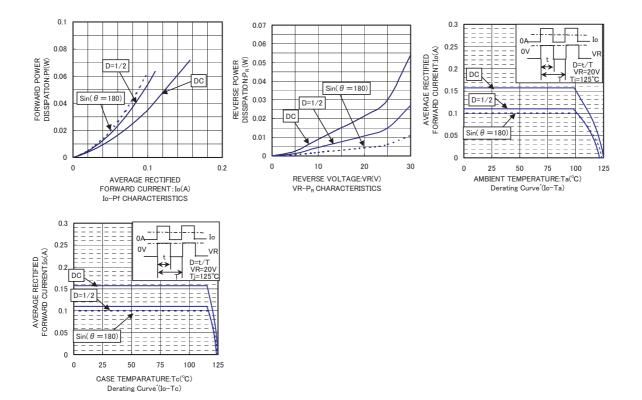
Absolute maximum rutings (1a-25 0)							
Parameter	Symbol	Limits	Unit				
Reverse voltage (repetitive peak)	V_{RM}	45	V				
Reverse voltage (DC)	V_R	40	V				
Average rectified forward current	lo	100	mA				
Forward current surge peak (60Hz · 1cyc)	I _{FSM}	1	Α				
Junction temperature	Tj	125	°C				
Storage 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	-	-	0.34	V	I _F =10mA
Reverse current	I _R	-	-	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 FORWARD CURRENT:IF(mA) 1000 REVERSE CURRENT:IR(uA) CAPACITANCE BETWEEN TERMINALS:Ct(pF) 10 100 10 0.1 0.1 0.01 400 500 0 300 0 20 FORWARD VOLTAGE: VF(mV) VF-IF CHARACTERISTICS REVERSE VOLTAGE: VR(V) VR-IR CHARACTERISTICS REVERSE VOLTAGE:VR(V) VR-Ct CHARACTERISTICS 470 310 Ta=25°C IF=100m/ Ta=25°C VR=10V Ta=25°C FORWARD VOLTAGE: VF(mV) 460 n=30pcs IF=10mA 25 FORWARD VOLTAGE:VF(mV) REVERSE CURRENT:IR(uA) 300 20 450 290 15 440 280 10 430 270 AVE:281.5mV 420 260 VF DISPERSION MAP IR DISPERSION MAP VF DISPERSION MAP 20 18 Ta=25°C Ta=25°C RESERVE RECOVERY TIME:trr(ns) IF=0.5A IR=1A PEAK SURGE FORWARD CURRENT:IFSM(A) 25 f=1MHz 16 CAPACITANCE BETWEEN TERMINALS:Ct(pF) IR=10V rr=0.25*IF 20 n=10pcs 12 10 AVE:5.81pF AVE:5.50A 2 AVE:6.20ns 0 Ct DISPERSION MAP trr DISPERSION MAP IFSM DISRESION MAP 1000 PEAK SURGE FORWARD CURRENTIFSM(A) TRANSIENT IMPEDANCE:Rth (°C/W) PEAK SURGE FORWARD CURRENT:IFSM(A) 10 100 5 10 THAERMAL 0 0.1 0.1 10 100 NUMBER OF CYCLES IFSM-CYCLE CHARACTERISTICS TIME:t(ms) TIME:t(s) IFSM-t CHARACTERISTICS Rth-t CHARACTERISTICS





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