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Rohm Semiconductor RB050LA-40TR

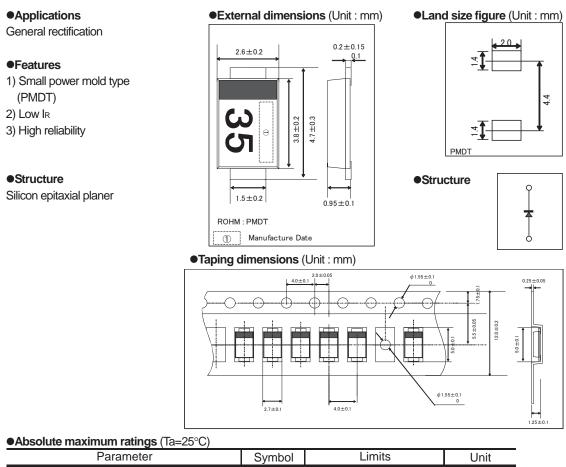
For any questions, you can email us directly: <u>sales@integrated-circuit.com</u>



Diodes

RB050LA-40

Schottky barrier diode RB050LA-40



Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V _{RM}	40	V
Reverse voltage (DC)	V _R	40	V
Average rectified forward current	lo	3	A
Forward current surge peak (60Hz · 1cyc)	I _{FSM}	70	A
Junction temperature	Tj	150	°C
Storage temperature	Tstg	-55 to +150	°C

(*1)Mounted on epoxy board. 180°Half sine wave

•Electrical characteristic (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Forward voltage	V _F 1	-	-	0.50	V	I _F =1.5A
	V _F 2	-	-	0.55	V	I _F =3.0A
Reverse current	I _R	-	-	0.1	mA	V _R =40V





Distributor of Rohm Semiconductor: Excellent Integrated System Limited Datasheet of RB050LA-40TR - DIODE SCHOTTKY 40V 3A PMDT Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

Diodes

Electrical characteristic curves 1000 1000000 10 Ta=150°C f=1MHz <u></u> <u></u> <u></u> + | + 100000 Ta=75°0 FORWARD CURRENT:IF(mA) REVERSE CURRENT: IR(uA) 10000 Ta=125°C CAPACITANCE BETWEEN TERMINALS:Ct(pF) Ta=125°C 100 1000 Ta=150°C Ta=75°C 100 Ta=25°C -25°C 10 0.1 10 Ta=-25°C E 01 ≣ Ŧ 0.01 0.01 1 0 15 20 25 30 35 5 10 40 0 200 300 400 500 600 100 0 10 15 20 25 30 5 FORWARD VOLTAGE: VF(mV) VF-IF CHARACTERISTICS REVERSE VOLTAGE: VR(V) VR-IR CHARACTERISTICS REVERSE VOLTAGE/VR(V) VR-Ct CHARACTERISTICS 600 530 100 Ta=25°C IF=3A n=30pcs 590 Ta=25°C 90 f=1MHz VR=0V Ta=25°C FORWARD VOLTAGE:VF(mV) 580 80 PACITANCE BETWEEN TERMINALS:Ct(pF) 520 REVERSE CURRENT:IR(uA) VR=40V lä n=30pc: 570 70 n=10pc: 60 560 510 CAPACITANCE 50 550 AVE:579.1pF 500 40 540 30 530 AVE:503.8mV 490 AVE:9.069uA 20 520 10 510 480 0 500 VF DISPERSION MAP Ct DISPERSION MAP IR DISPERSION MAP 20 200 200 Ifs 1cyc Ta=25°C RESERVE RECOVERY TIME:trr(ns) IF=0.5A IR=1A PEAK SURGE FORWARD CURRENT:IFSM(A) FORWARD CURRENT: IFSM(A) 8.3 8.3ms 150 15 150 lrr=0.25*IF 1cyc n=10pcs PEAK SURGE έċċ 100 100 10 AVE:157.0A 50 50 5 AVE:9.3ns 0 0 0 10 100 NUMBER OF CYCLES trr DISPERSION MAP IFSM DISRESION MAP IFSM-CYCLE CHARACTERISTICS 1000 300 5 THAERMAL IMPEDANCE:Rth (°C/W) +1+Mounted on epoxy board PEAK SURGE FORWARD CURRENT: JFSM(A) 250 4 -1+1+1 Rth(i 100 TIT ⊑ ⊢ D=1/2 DISSIPATION:Pf(W) FORWARD POWER 200 3 TRANSIENT TIDE нн Rth(j-c $Sin(\theta = 180)$ пт гіпі 10 150 2 IM=100 F=14 Ξ DC 100 I DI I DI 1 Ш 50 IDDO CUID¢ 0.1 0 0 2 5 0.001 1000 0 1 3 4 0.1 10 TIME:t(s) 0.1 10 100 ¹ TIME:t(ms) AVERAGE RECTIFIED IFSM-t CHARACTERISTICS Rth-t CHARACTERISTICS FORWARD CURRENT: Io(A) Io-Pf CHARACTERISTICS

rohm

2/3

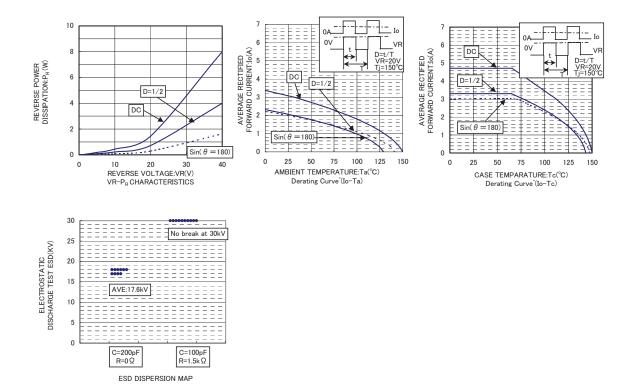
RB050LA-40



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Diodes

RB050LA-40







Appendix

Notes

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