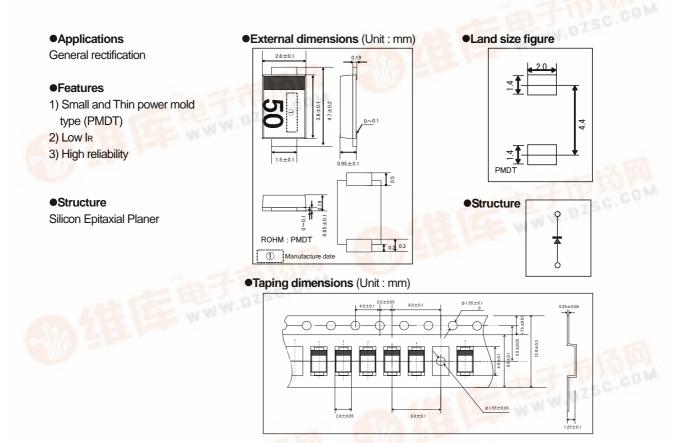
RB050LA-30

Diodes

Schottky barrier diode **RB050LA-30**



•Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Rever voltage (repetitive peak)	V _{RM}	30	V	
Reverse voltage (DC)	V _R	30	V	
Average rectified forward current *	lo	3	A	
Forward cirremt surge peak (60Hz · 1cyc)	I _{FSM}	70	А	
Junction temperature	Tj	150	C°	
Storage temperature	Tstg	-55 to +150	C°	

(*1)Tc=90°Cmax Mounted on epoxy board. 180°Half sine wave

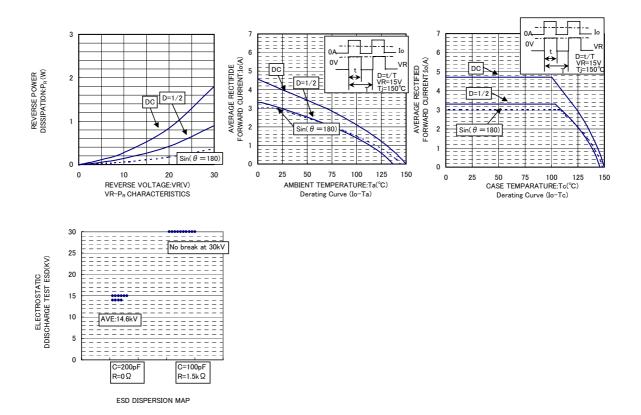
●Electrical characteristic (Ta=25°C)									
Parameter	Symbol	Min.	Тур.	Max.	Unit		Conditions		
Forward voltage	V _F	-	-	0.45	V	I _F =3.0A			
Reverse current	I _R	-	-	150	μA	$V_R=30V$			



Diodes

 Electrical characteristic curves Ta=150°C 1000000 10000 10 ☐<u>Z</u>I<u></u>Ta=125℃ f=1MHz Ta=75°C 100000 <u>= = |</u> CAPACITANCE BETWEEN TERMINALS:Ct(pF) 00 00 Ta=125°C FORWARD CURRENT:IF(A) REVERSE CURRENT:IR(uA) 10000 Ta=25°C 1000 Ŧ ---Ē Ŧ 0.1 -25°C 100 Ta=25°C 10 ΠŦ Та -25°C 0.01 1 割割目 ĐĒ τIJ IDI Ē Ē A FIFI +1-HH4 + H +1+0.1 ±'±'= 0.001 10 0.01 5 10 20 0 400 500 600 0 15 25 30 100 200 300 0 5 10 15 20 25 30 FORWARD VOLTAGE: VF(mV) VF-IF CHARACTERISTICS REVERSE VOLTAGE: VR(V) VR-IR CHARACTERISTICS REVERSE VOLTAGE/VR(V) VR-Ct CHARACTERISTICS 440 1050 200 Ξ Ta=25°C IF=3A Ξ Ta=25°C Ξ === Ξ Ξ Ξ 1040 Ta=25°C 180 VR=30V Ξ f=1MHz FORWARD VOLTAGE:VF(mV) 430 n=30pcs 160 =30pc 1030 VR=0V 1020 REVERSE CURRENT:IR(140 BETWE =10pc TERMINALS:Ct(pF Ξ E 420 120 1010 <u>ال</u>: CAPACITANCE 100 1000 410 80 990 AVE:18.82uA 60 980 Ξ Ξ AVE:414.1mV 40 400 970 AVE:1012.1pF ΞΞ Ξ Ξ 20 Ξ 960 Ξ Ξ ==== Ξ Ξ 0 390 950 VF DISPERSION MAP IR DISPERSION MAP Ct DISPERSION MAP 300 30 300 -Ta=25°C = RESERVE RECOVERY TIME:trr(ns) PEAK SURGE FORWARD CURRENT: JFSM(A) 25 IF=0.5A PEAK SURGE FORWARD CURRENT:IFSM(A) 250 250 IR=1A ns 8.3ms 8.3 Irr=0.25*I 20 200 200 1cyc n=10pcs Ξ = 15 150 150 AVE:214.0A 10 100 100 AVE:12.3ns ヒロロ 1 + コロ 5 50 50 İ ロエロ יםבי 0 0 0 10 100 NUMBER OF CYCLES IFSM-CYCLE CHARACTERISTICS trr DISPERSION MAP IFSM DISRESION MAP 500 3 1000 E = 13 6. F <u>E 13 A</u> TRANSIENT THAERMAL IMPEDANCE:Rth (°C/W) Mounted on epoxy board Rth(i-a PEAK SURGE FORWARD CURRENT:IFSM(A) 400 100 2 FORWARD POWER DISSIPATION:Pf(W) D=1/2 300 Rth(j-1 1 Ţ 10 $Sin(\theta = 180)$ 200 IM=100m IF=1A 100 -1ms Ξ ΤII 01 0 0 0.001 1000 0.1 10 0 5 0.1 10 100 1 TIME:t(s) Rth-t CHARACTERISTICS AVERAGE RECTIFIED FORWARD CURRENT: Io(A) Io-Pf CHARACTERISTICS TIME:t(ms) IFSM-t CHARACTERISTICS

Diodes



Appendix

Notes

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