Schottky barrier diode

RB731XN

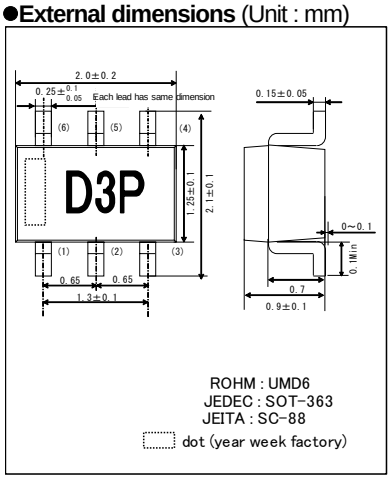
●**Applications**

General rectification

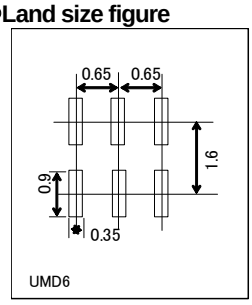
●**Features**

1) Small power mold type.
(UMD6)
2) Low V_F
3) High reliability

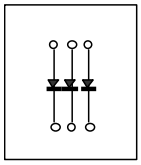
●**External dimensions** (Unit : mm)



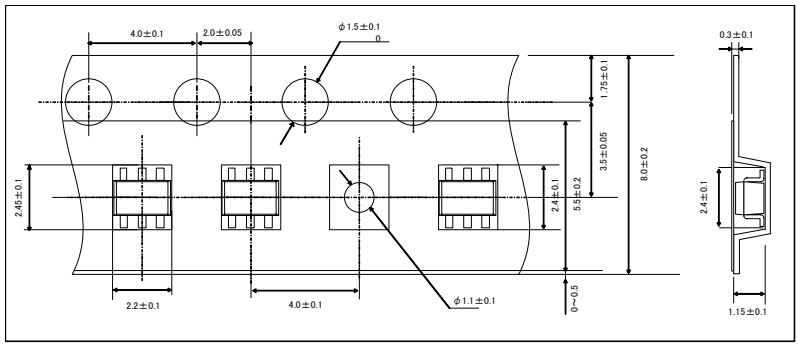
●**Land size figure**



●**Structure**



●**Taping dimensions** (Unit : mm)



●**Absolute maximum ratings** (Ta=25°C)

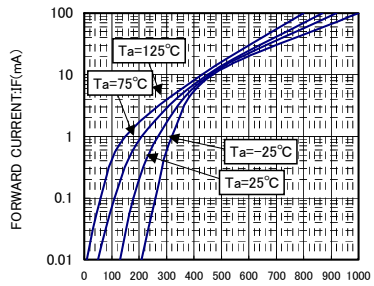
Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V_{RM}	40	V
Reverse voltage (DC)	V_R	40	V
Average rectified forward current *	I_O	30	mA
Forward current surge peak (60Hz・1cyc.) *	I_{FSM}	200	mA
Junction temperature	Tj	125	°C
Storage temperature	Tstg	−40 to +125	°C

* Rating for each diode Io/3

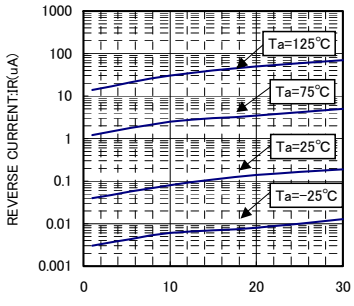
●**Electrical characteristic** (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	–	–	0.37	V	I_F=1mA
Reverse current	I_R	–	–	1	μA	V_R=10V
Capacitance between terminal	Ct	–	2	–	pF	V_R=1V, f=1MHz

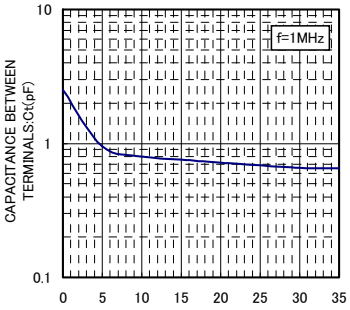
●Electrical characteristic curves



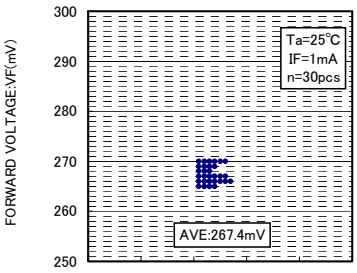
FORWARD VOLTAGE : VF(mV)
VF-IF CHARACTERISTICS



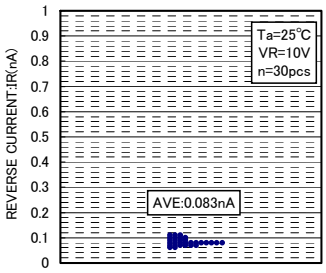
REVERSE VOLTAGE : VR(V)
VR-IR CHARACTERISTICS



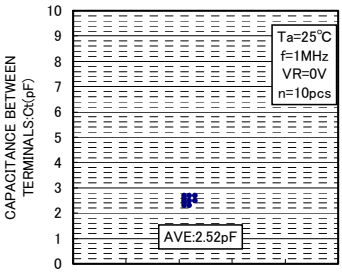
REVERSE VOLTAGE:VR(V)
VR-Ct CHARACTERISTICS



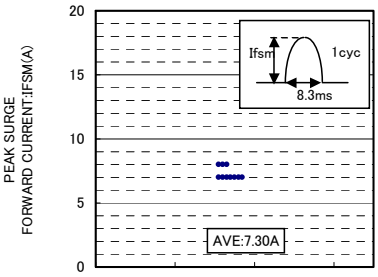
VF DIPERSION MAP



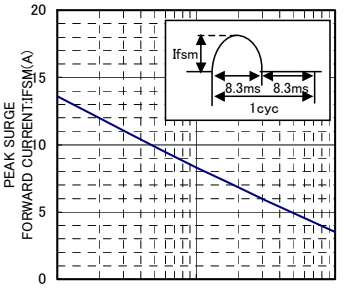
IR DISPERSION MAP



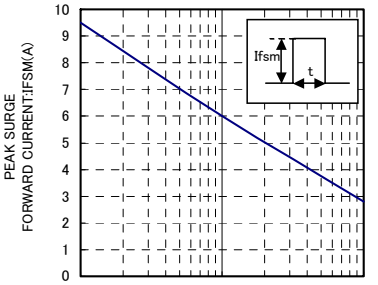
Ct DISPERSION MAP



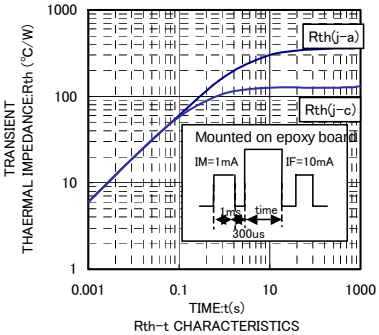
IFSM DISPERSION MAP



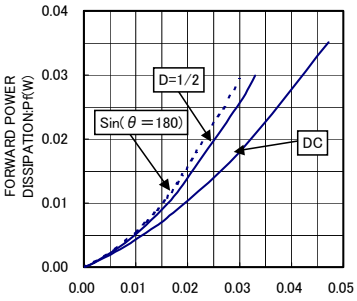
NUMBER OF CYCLES
IFSM-CYCLE CHARACTERISTICS



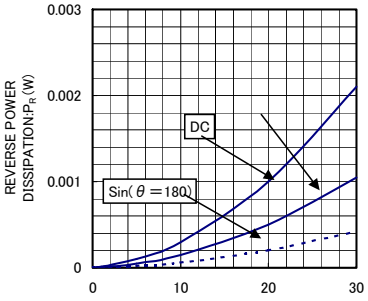
TIME:t(ms)
IFSM-t CHARACTERISTICS



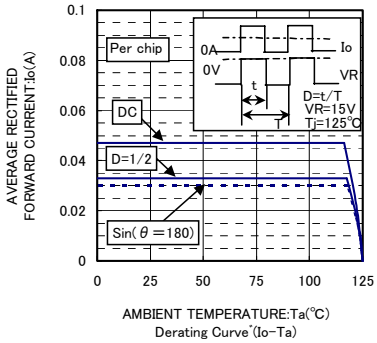
Rth-t CHARACTERISTICS

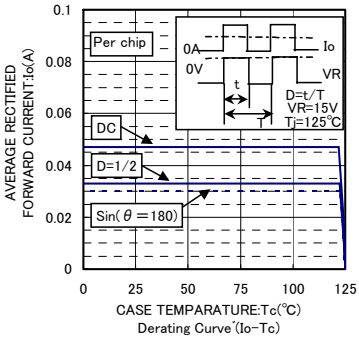


AVERAGE RECTIFIED
FORWARD CURRENT Io(A)
Io-Pf CHARACTERISTICS



REVERSE VOLTAGE:VR(V)
VR-P_R CHARACTERISTICS


0.1
0.08
0.06
0.04
0.02
0
AVERAGE RECTIFIED FORWARD CURRENT:Io(A)
Per chip
DC
D=1/2
Sin(θ=180)
0A
0V
Io
VR
t
T
D=t/T
VR=15V
Tj=125℃
0
25
50
75
100
125
AMBIENT TEMPERATURE:Ta(℃)
Derating Curve(Io-Ta)


0.1
0.08
0.06
0.04
0.02
0
AVERAGE RECTIFIED FORWARD CURRENT:Io(A)
Per chip
DC
D=1/2
Sin(θ=180)
0A
0V
Io
VR
t
T
D=t/T
VR=15V
Tj=125℃
0
25
50
75
100
125
CASE TEMPARATURE:Tc(℃)
Derating Curve(Io-Tc)

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