Shottky barrier diode

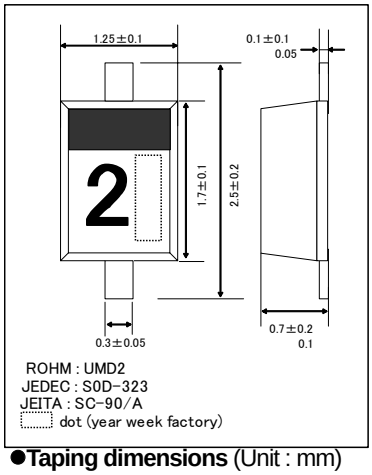
RB500V-40

●**Application**
Low current rectification

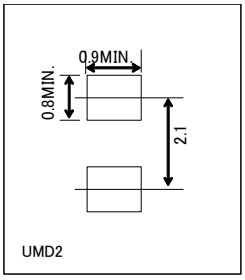
●**Features**
1) Ultra Small mold type. (UMD2)
2) Low I_R
3) High reliability.

●**Construction**
Silicon epitaxial planar

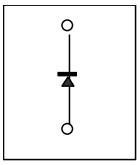
●**External dimensions** (Unit : mm)



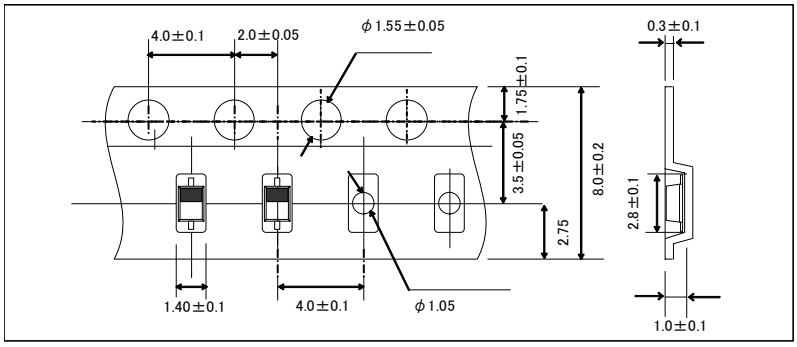
●**Lead size figure** (Unit : mm)



●**Structure**



●**Taping dimensions** (Unit : mm)



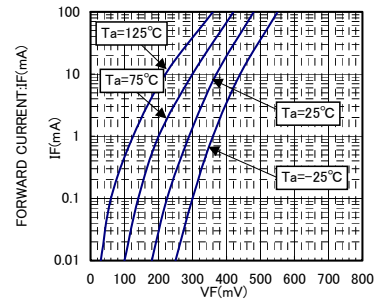
●**Absolute maximum ratings** (Ta=25°C)

Parameter	Symbol	Limits	Unit
Reverse voltage (repetitive peak)	V_{RM}	45	V
Reverse voltage (DC)	V_R	40	V
Average rectified forward current	Io	100	mA
Forward current surge peak（60Hz・1cyc）	I_{FSM}	1	A
Junction temperature	Tj	125	℃
Storage temperature	Tstg	-40 to +125	℃

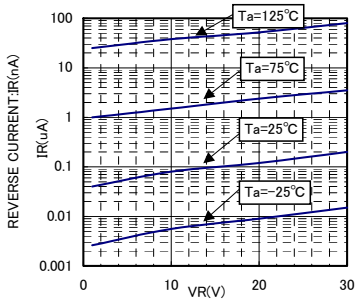
●**Electrical characteristics** (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	-	0.45	V	I_F=10mA
Reverse current	I_R	-	-	1	μA	V_R=10V
Capacitance between terminals	Ct	-	6.0	-	pF	V_R=10V , f=1MHz

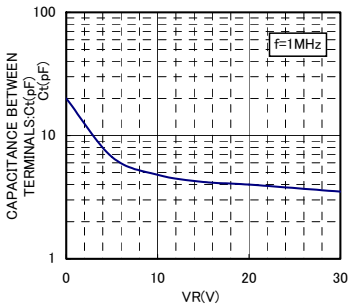
●**Electrical characteristic curves** (Ta=25°C)



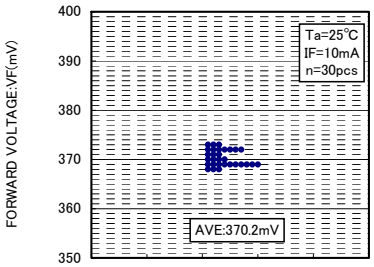
FORWARD VOLTAGE:VF(mV)
VF-IF CHARACTERISTICS



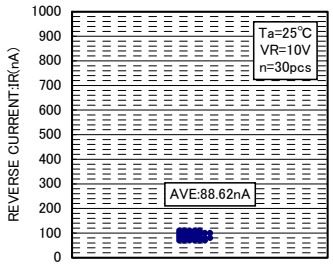
REVERSE VOLTAGE:VR(V)
VR-IR CHARACTERISTICS



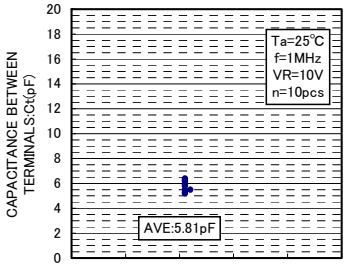
REVERSE VOLTAGE:VR(V)
VR-Ct CHARACTERISTICS



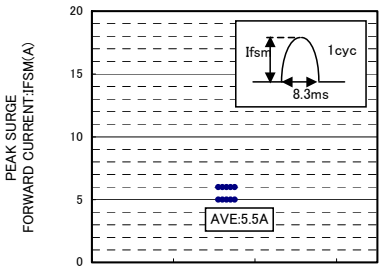
VF DISPERSION MAP



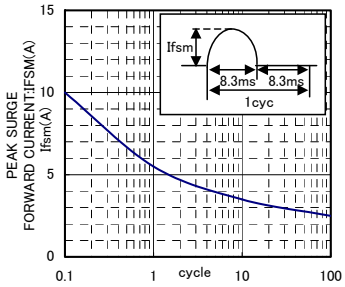
IR DISPERSION MAP



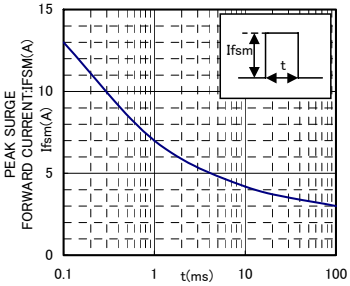
Ct DISPERSION MAP



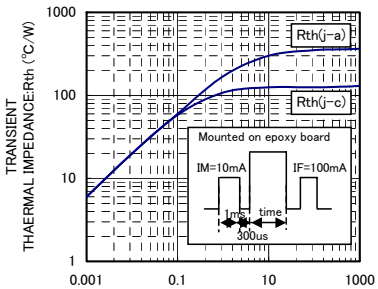
IFSM DISRESION MAP



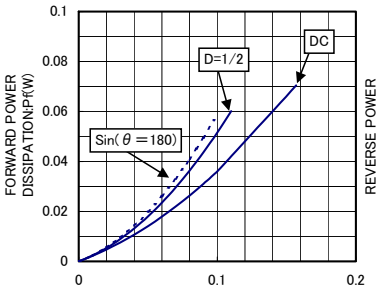
NUMBER OF CYCLES
IFSM-CYCLE CHARACTERISTICS



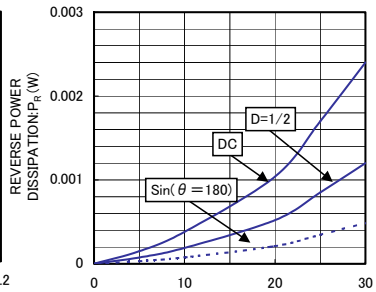
TIME:t(ms)
IFSM-t CHARACTERISTICS



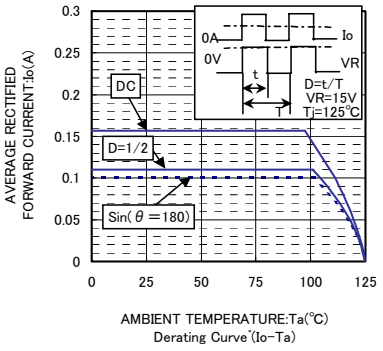
TIME:t(s)
Rth-t CHARACTERISTICS



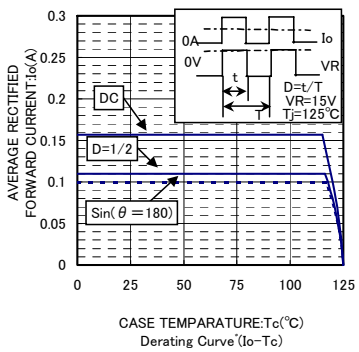
AVERAGE RECTIFIED
FORWARD CURRENT:Io(A)
Io-Pf CHARACTERISTICS



REVERSE VOLTAGE:VR(V)
VR-P_R CHARACTERISTICS



AMBIENT TEMPERATURE:Ta(°C)
Derating Curve(Io-Ta)



CASE TEMPARATURE:Tc(°C)
Derating Curve(Io-Tc)

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