

Rectifier diode

1SR139-400

●Applications

High speed rectification

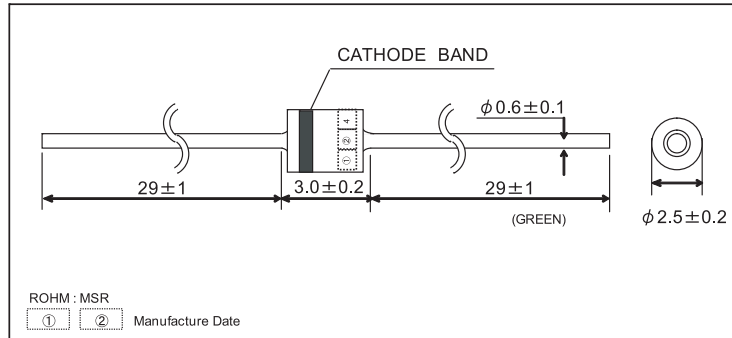
●Features

- 1) Cylindrical mold. (MSR)
- 2) High reliability.
- 3) Fast recovery speed.

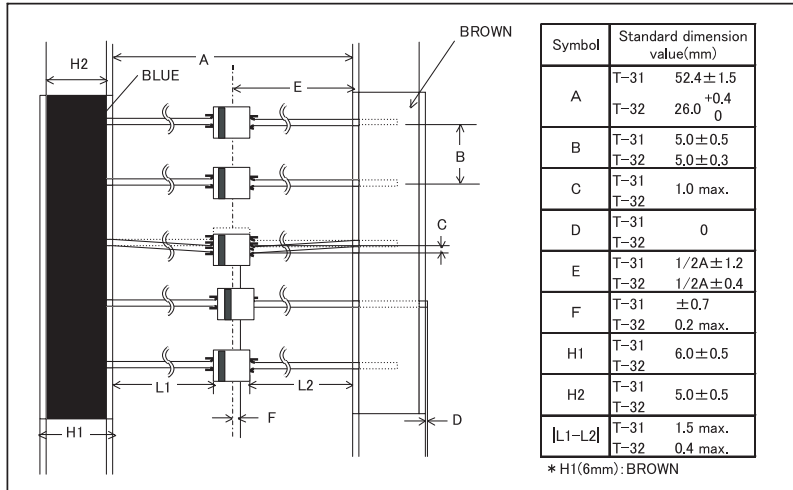
●Construction

Silicon diffused junction

●Dimensions (Unit : mm)



●Taping specifications (Unit : mm)



●Absolute maximum ratings (Ta=25°C)

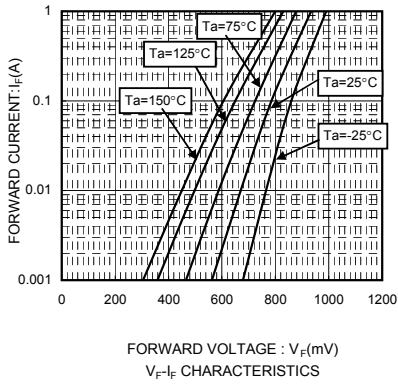
Parameter	Symbol	Limits	Unit
Absolute peak reverse voltage	V_{RMS}	500	V
Reverse voltage (repetitive peak)	V_R	400	V
Average rectified forward current (*1)	I_o	1	A
Forward current surge peak (60Hz / 1cyc)	I_{FSM}	40	A
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-40 to +150	°C

(*1) Mounting on alumina board

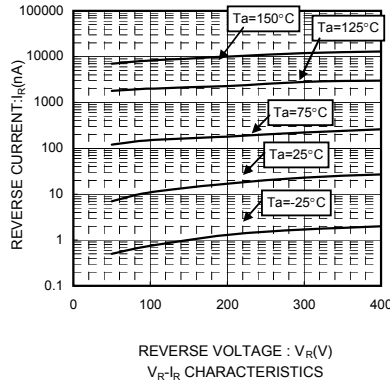
●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_F	-	-	1.1	V	$I_F=1.0A$
Reverse current	I_R	-	-	10	μA	$V_R=400V$

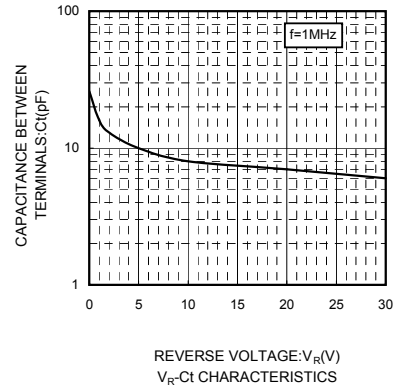
●Electrical characteristics curves



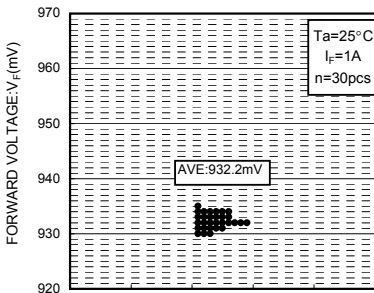
FORWARD VOLTAGE : V_F (mV)
 V_F - I_F CHARACTERISTICS



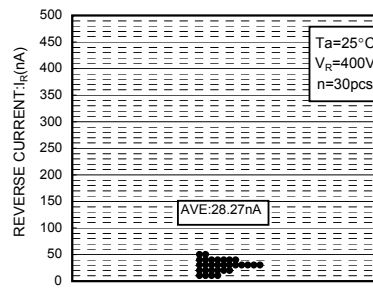
REVERSE VOLTAGE : V_R (V)
 V_R - I_R CHARACTERISTICS



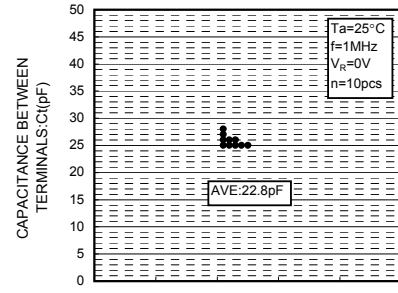
REVERSE VOLTAGE: V_R (V)
 V_R - C_T CHARACTERISTICS



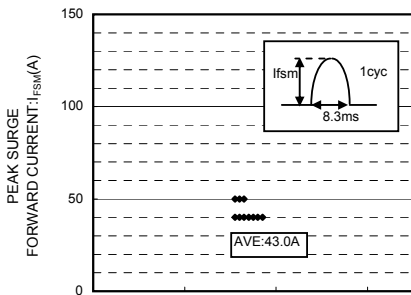
V_F DISPERSION MAP



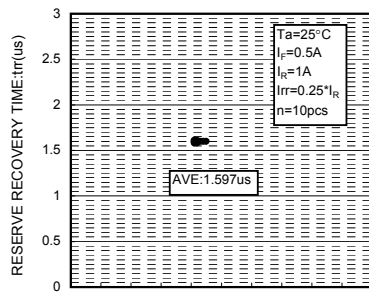
I_R DISPERSION MAP



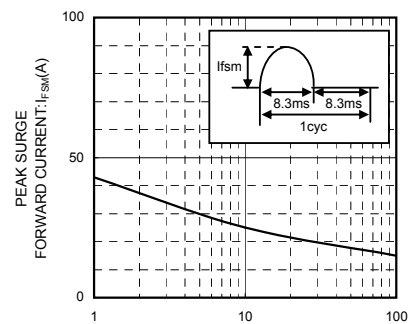
C_T DISPERSION MAP



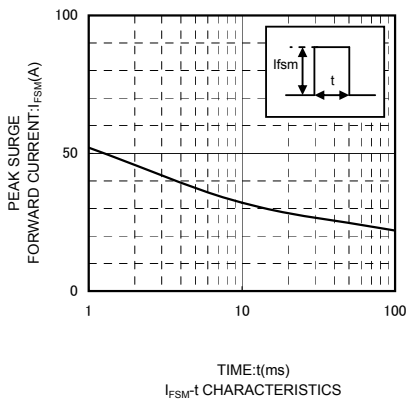
I_{FSM} DISPERSION MAP



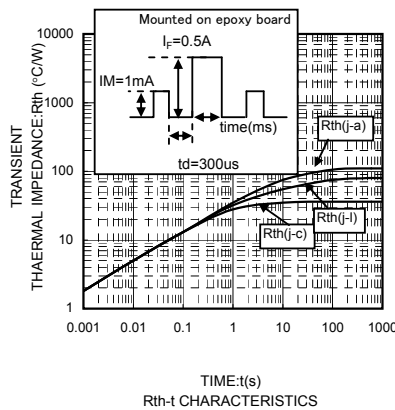
t_{rr} DISPERSION MAP



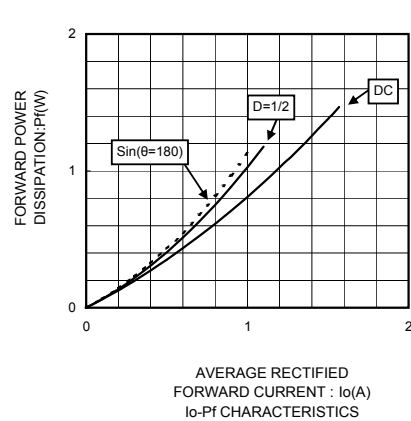
NUMBER OF CYCLES
 I_{FSM} -CYCLE CHARACTERISTICS



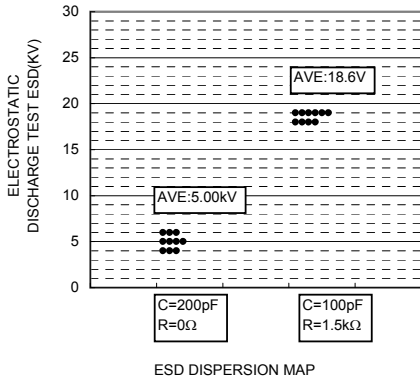
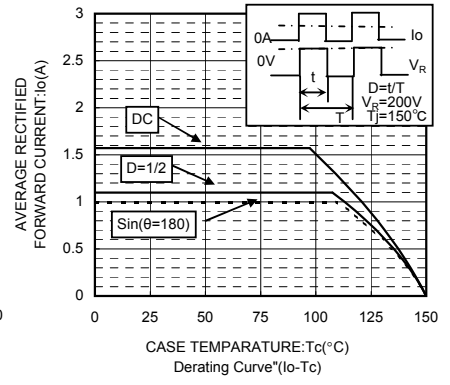
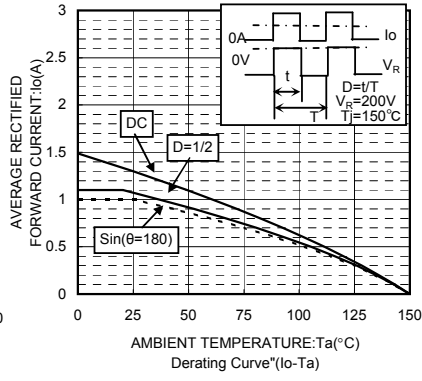
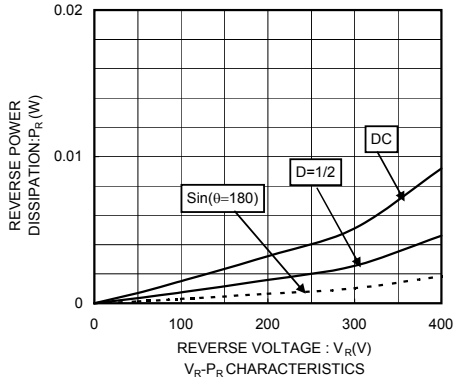
TIME: t (ms)
 I_{FSM} - t CHARACTERISTICS



TIME: t (s)
 R_{th-t} CHARACTERISTICS



AVERAGE RECTIFIED
FORWARD CURRENT : I_o (A)
 I_o - P_F CHARACTERISTICS



Notes

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