VOLTAGE RANGE
40 Volts
CURRENT
0.03 Ampere

FEATURES

- Small surface mounting type
- Low reverse current and low forward voltage
- High reliability

MECHANICAL DATA

Case: SOD-523
Terminals: Solderable per MIL-STD-750, Method 2026

SOD-523

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings @Ta=25℃

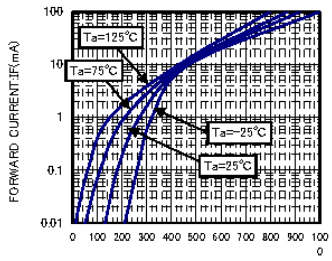
Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	40	V
Reverse Voltage	V_R	30	V
Mean Rectifying Current	I_O	30	mA
Peak Forward Surge Current (60 Hz, 1 Cycle)	I_{FSM}	200	mA
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	- 40 to + 125	°C

Electrical Characteristics (T_J=25℃unless otherwise noted)

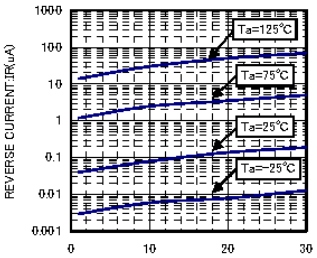
Parameter	Symbol	Typ.	Max.	Unit
Forward Voltage at I_F = 1 mA	V_F	-	0.37	V
Reverse Current at V_R = 30 V	I_R	-	0.5	μA
Capacitance Between Terminals at V_R = 1 V, f = 1 MHz	C_T	2	-	pF

Note: ESD sensitive product handling required.

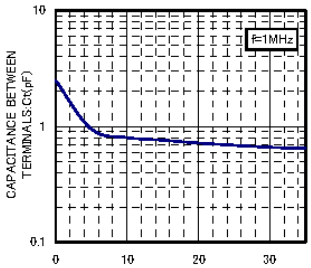
RATING AND CHARACTERISTIC CURVES



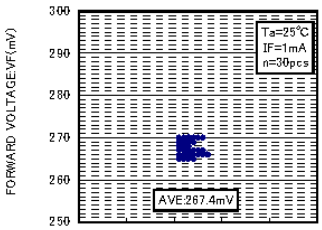
FORWARD VOLTAGE:VF(mV)
VF-IF CHARACTERISTICS
VF分布



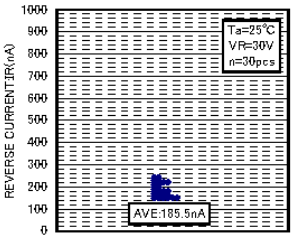
REVERSE VOLTAGE:VR(V)
VR-IR CHARACTERISTICS



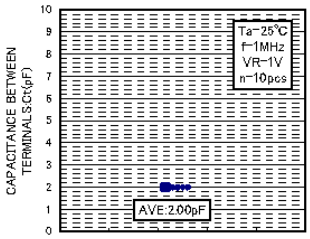
REVERSE VOLTAGE:VR(V)
VR-Ct CHARACTERISTICS



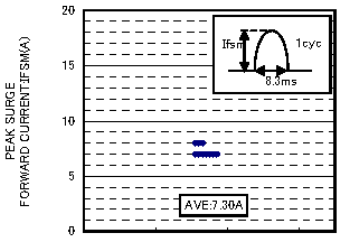
VF DIPERSION MAP



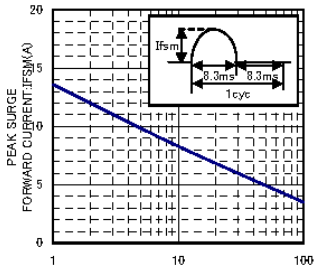
IR DISPERSION MAP



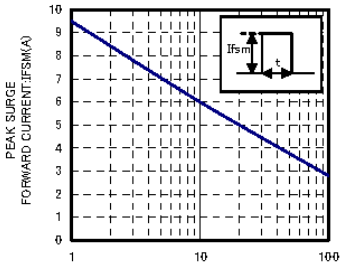
Ct DISPERSION MAP



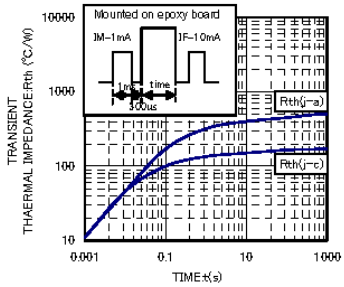
IFSM DISPERSION MAP



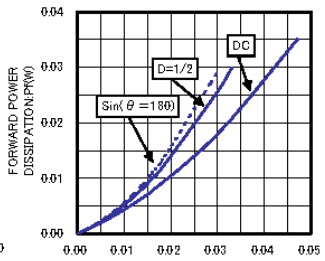
NUMBER OF CYCLES
IFSM-CYCLE CHARACTERISTICS



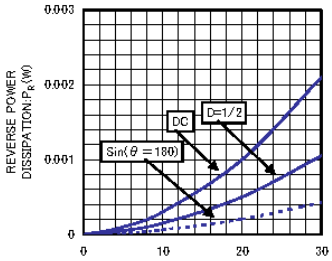
TIME:t(ms)
IFSM-t CHARACTERISTICS



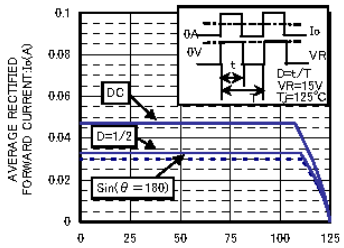
TIME:t(s)
Rth-t CHARACTERISTICS



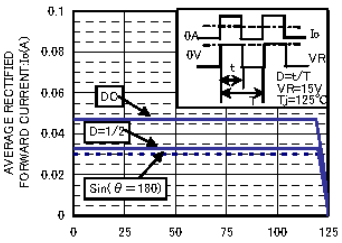
AVERAGE RECTIFIED
FORWARD CURRENT Io(A)
Io-Pf CHARACTERISTICS



REVERSE VOLTAGE:VR(V)
VR-PR CHARACTERISTICS



AMBIENT TEMPERATURE:Ta(℃)
Derating Curve (Io-Ta)

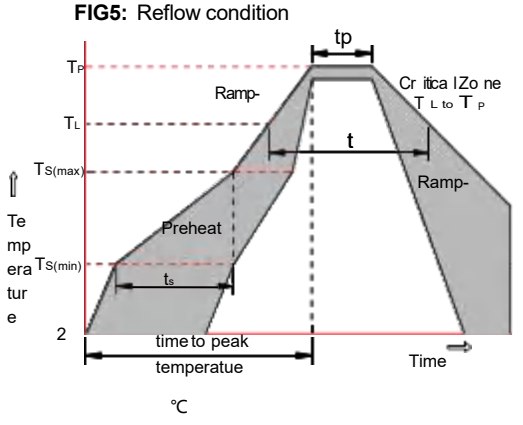


CASE TEMPARATURE:Tc(℃)
Derating Curve (Io-Tc)

Soldering parameters

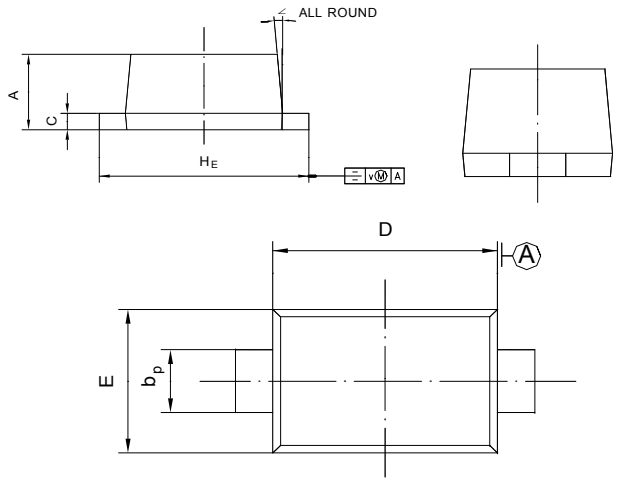
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

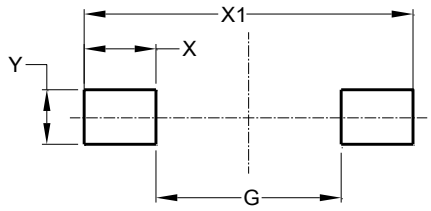
FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

SOD523



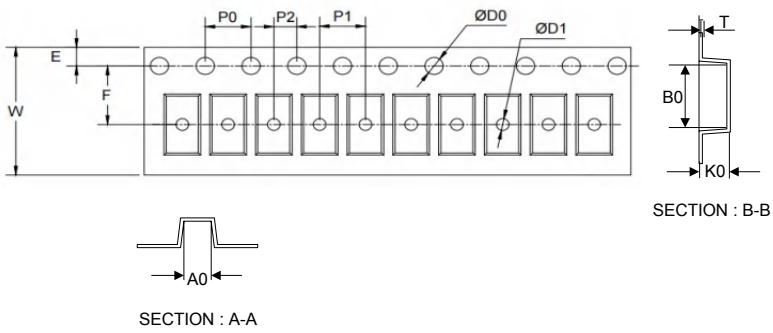


UNIT	A	b_p	C	D	E	H_E	V	∠
mm	0.70 0.50	0.40 0.20	0.14 0.05	1.30 1.10	0.90 0.75	1.70 1.50	0.1	5°

Dimensions	Value (in mm)
G	0.85
X	0.70
X1	2.25
Y	0.80

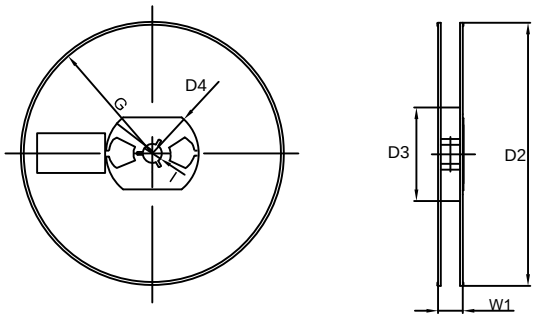
Tape & rell specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	2.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	0.50±0.20
E	1.55±0.25
F	3.60±0.20
W	8.00±0.20
A0	1.30±0.20
B0	2.35±0.20
K0	0.95±0.20
T	0.20±0.20

7” Reel



D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0

Quantity: 3000PCS