

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

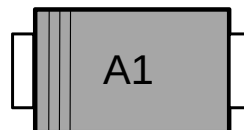
VOLTAGE RANGE

100Volts

CURRENT

0.15 Ampere

MECHANICAL DATA



- * Case: Molded plastic
- * Lead: Axial leads, solderable per MIL-STD-750, method 2026
- * Polarity: Polarity symbols marked on case

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

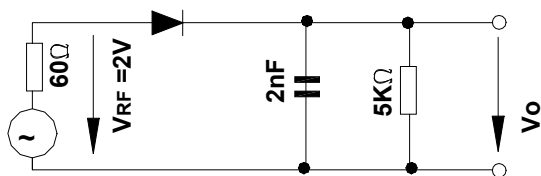
Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	100	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Non-repetitive Peak Forward Surge Current at $t = 1 \mu s$	I_{FSM}	2	A
Power Dissipation	P_{tot}	210	mW
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	312	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{slg}	- 65 to + 150	°C

Characteristics at $T_a = 25^\circ C$

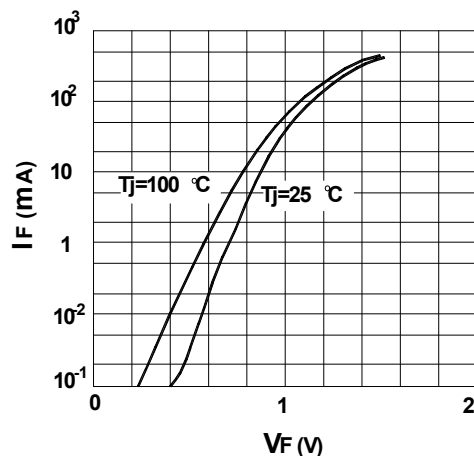
Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 1 \mu A$	$V_{(BR)R}$	100	-	V
Forward Voltage at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 150 \text{ mA}$	V_F	- - -	0.855 1 1.25	V
Peak Reverse Current at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}, T_J = 150^\circ C$ at $V_R = 25 \text{ V}, T_J = 150^\circ C$	I_R	- - - -	1 100 50 30	μA nA μA μA
Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_T	-	8	pF
Reverse Recovery Time at $I_{rr} = 0.1 \times I_R, I_F = I_R = 10 \text{ mA}, R_L = 100 \Omega$	t_{rr}	-	4	ns

RATING AND CHARACTERISTIC CURVES

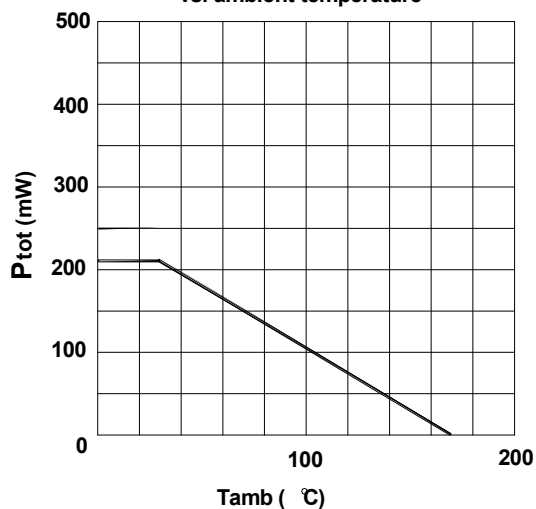


Rectification Efficiency Measurement Circuit

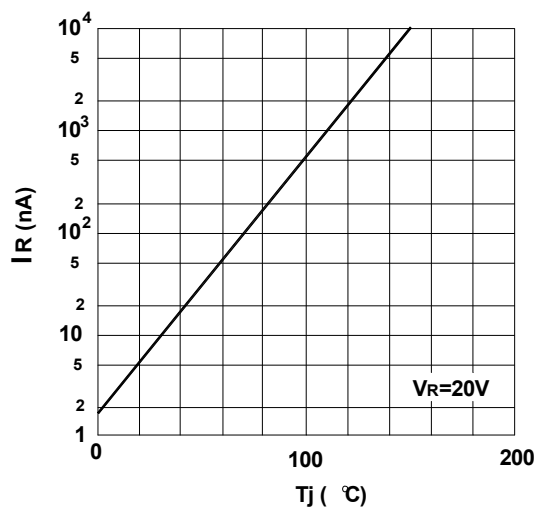
Forward characteristics



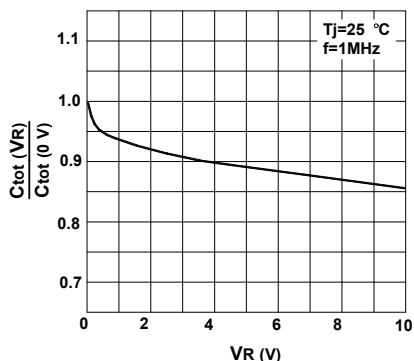
Ammissible power dissipation
vs. ambient temperature



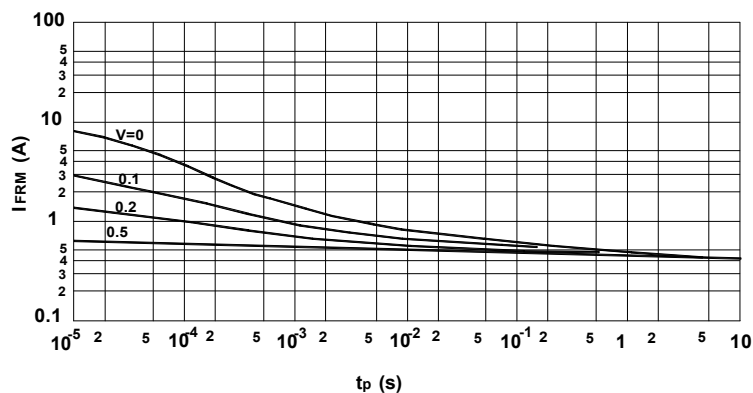
Leakage current vs. junction temperature



Reverse capacitance vs. reverse voltage

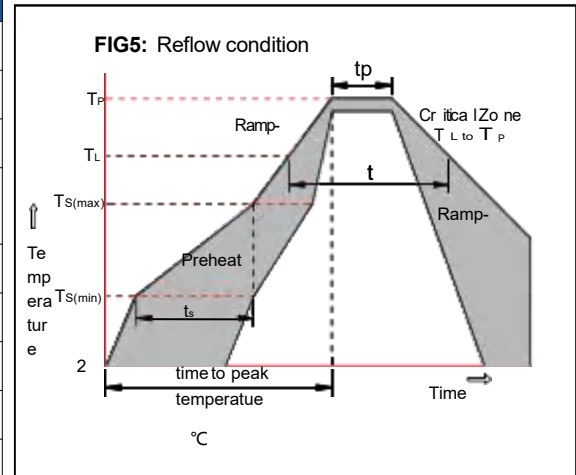


Ammissible repetitive peak forward current vs. pulse duration



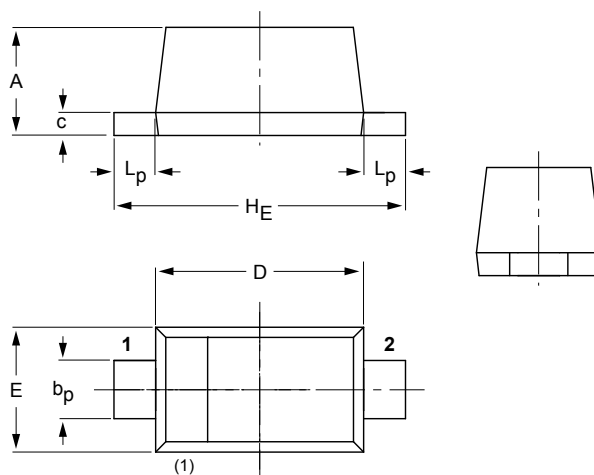
Soldering parameters

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



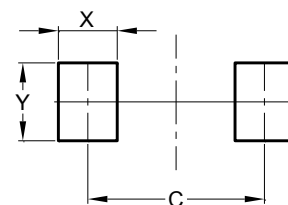
Package Dimensions & Suggested Pad Layout

SOD-723



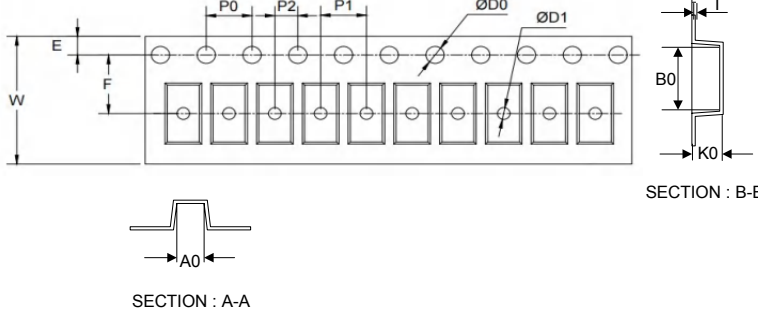
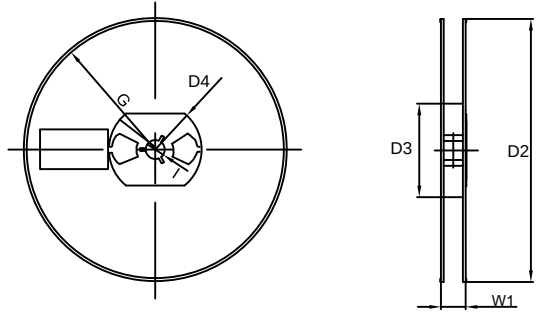
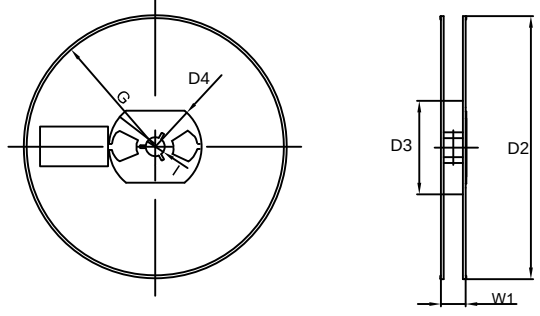
DIMENSIONS (mm are the original dimensions)

UNIT	A	bp	c	D	E	HE	Lp
mm	0.55 0.49	0.32 0.25	0.15 0.08	1.05 0.95	0.65 0.55	1.45 1.35	0.27 0.13



Dimensions	Value (in mm)
C	1.20
X	0.60
Y	0.70

Tape & reel specification

Tape  SECTION : A-A SECTION : B-B	<table> <tr> <th>Symbol</th><th>Dimension (mm)</th></tr> <tr><td>P0</td><td>4.00±0.20</td></tr> <tr><td>P1</td><td>2.00±0.20</td></tr> <tr><td>P2</td><td>2.00±0.20</td></tr> <tr><td>D0</td><td>1.55±0.20</td></tr> <tr><td>D1</td><td>0.50±0.20</td></tr> <tr><td>E</td><td>1.55±0.25</td></tr> <tr><td>F</td><td>3.60±0.20</td></tr> <tr><td>W</td><td>8.00±0.20</td></tr> <tr><td>A0</td><td>1.00±0.20</td></tr> <tr><td>B0</td><td>1.85±0.20</td></tr> <tr><td>K0</td><td>0.90±0.20</td></tr> <tr><td>T</td><td>0.20±0.20</td></tr> </table>	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	1.00±0.20	B0	1.85±0.20	K0	0.90±0.20	T	0.20±0.20
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