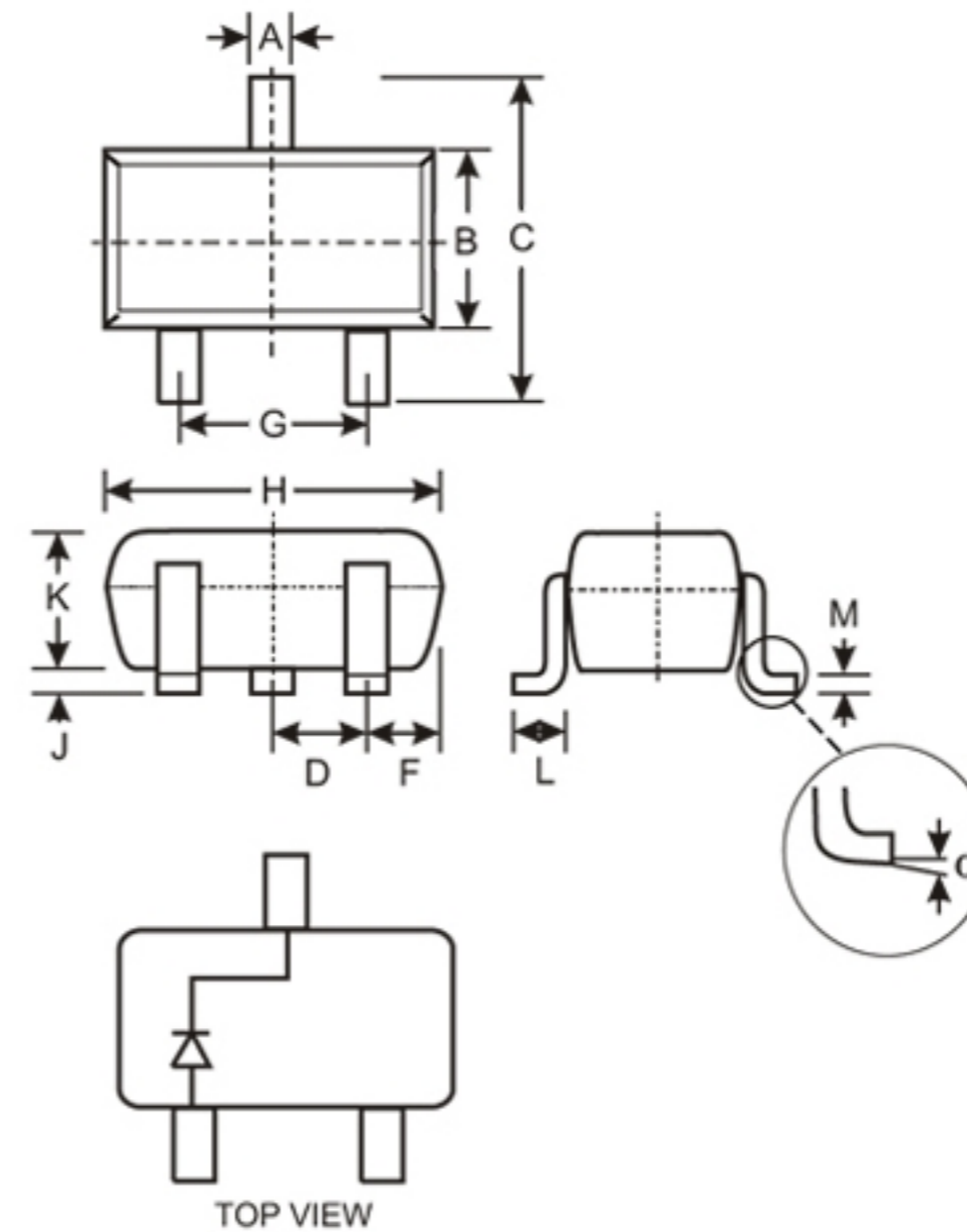


## ● Features

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

## ● Mechanical Data

Case: SOT-323, Molded Plastic  
 Case Material - UL Flammability Rating Classification 94V-0  
 Moisture sensitivity: Level 1 per J-STD-020A  
 Terminals: Solderable per MIL-STD-202, Method 208  
 Terminal Connections: See Diagram  
 BAS19W Marking: KA8 or KT2 or KT3 (See Page 3)  
 BAS20W Marking: KT2 or KT3 (See Page 3)  
 BAS21W Marking: KT3 (See Page 3)  
 Weight: 0.006 grams (approx.)



SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.18
$\alpha$	0°	8°
All Dimensions in mm		

## ● Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAS19W	BAS20W	BAS21W	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	120	200	250	V
Working Peak Reverse Voltage DC Blocking Voltage	$V_{RWM}$ $V_R$	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	141	V
Forward Continuous Current (Note 1)	$I_{FM}$	400			mA
Average Rectified Output Current (Note 1)	$I_O$	200			mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	$I_{FSM}$	2.5 0.5			A
Repetitive Peak Forward Surge Current	$I_{FRM}$	625			mA
Power Dissipation	$P_d$	200			mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625			$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150			$^\circ\text{C}$

## ● Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	BAS19W BAS20W BAS21W $V_{(BR)R}$	120 200 250	— — —	V	$I_R = 100\mu\text{A}$
Forward Voltage (Note 2)	$V_F$	—	1.0 1.25	V	$I_F = 100\text{mA}$ $I_F = 200\text{mA}$
Reverse Current @ Rated DC Blocking Voltage (Note 2)	$I_R$	—	100 15	nA $\mu\text{A}$	$T_j = 25^\circ\text{C}$ $T_j = 100^\circ\text{C}$
Total Capacitance	$C_T$	—	5.0	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	50	ns	$I_F = I_R = 30\text{mA}$ , $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

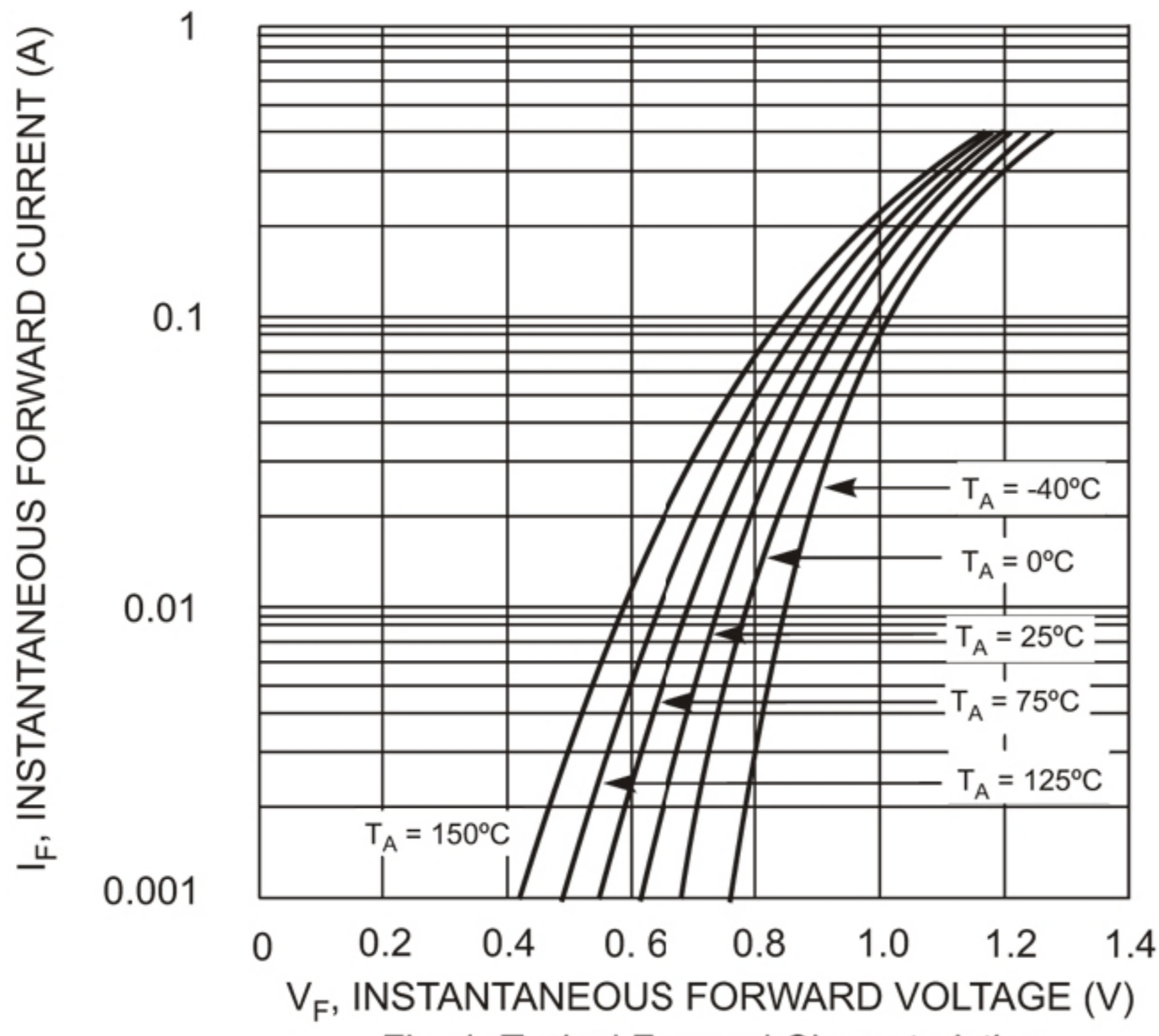


Fig. 1 Typical Forward Characteristics

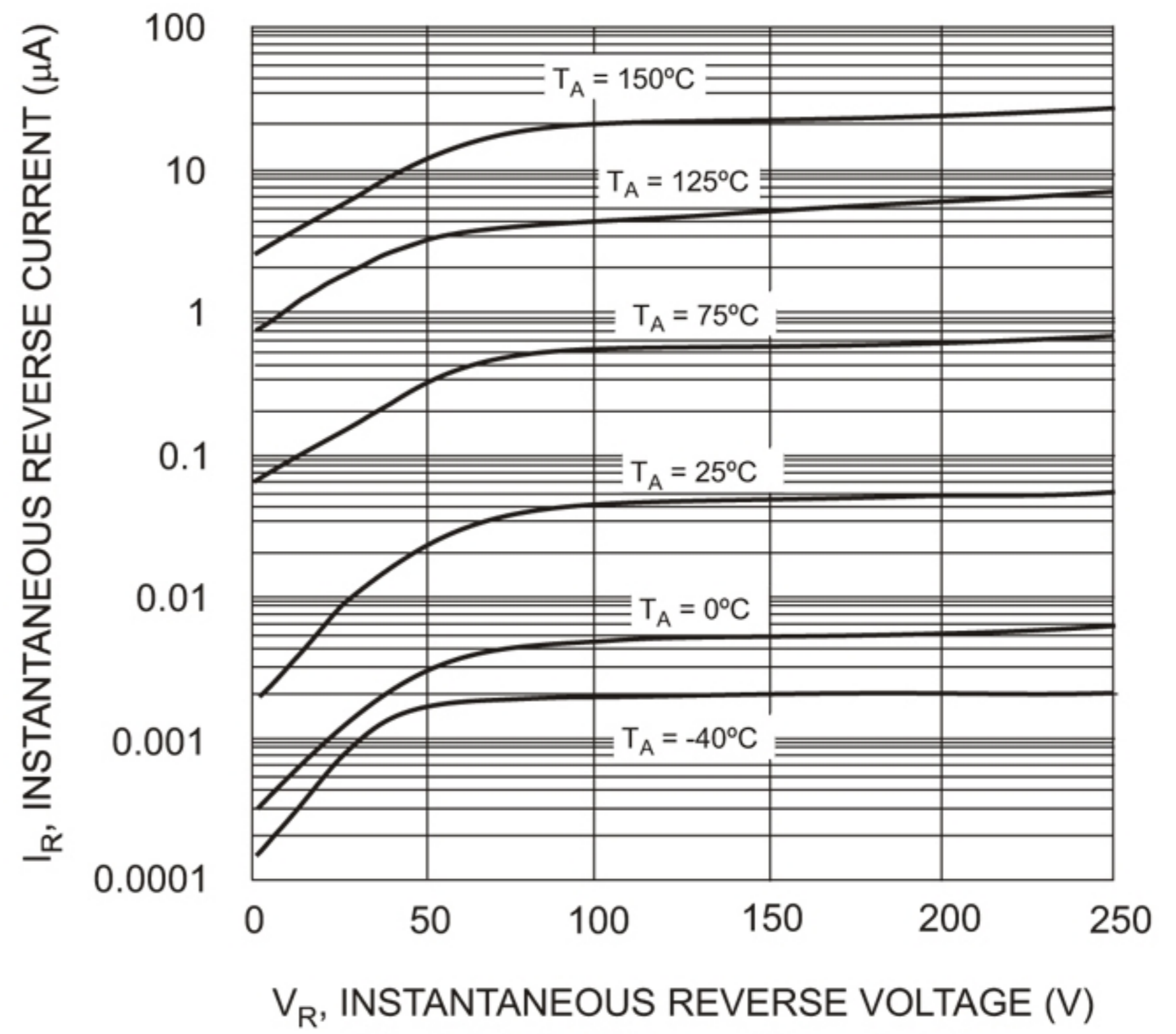


Fig. 2 Typical Reverse Characteristics

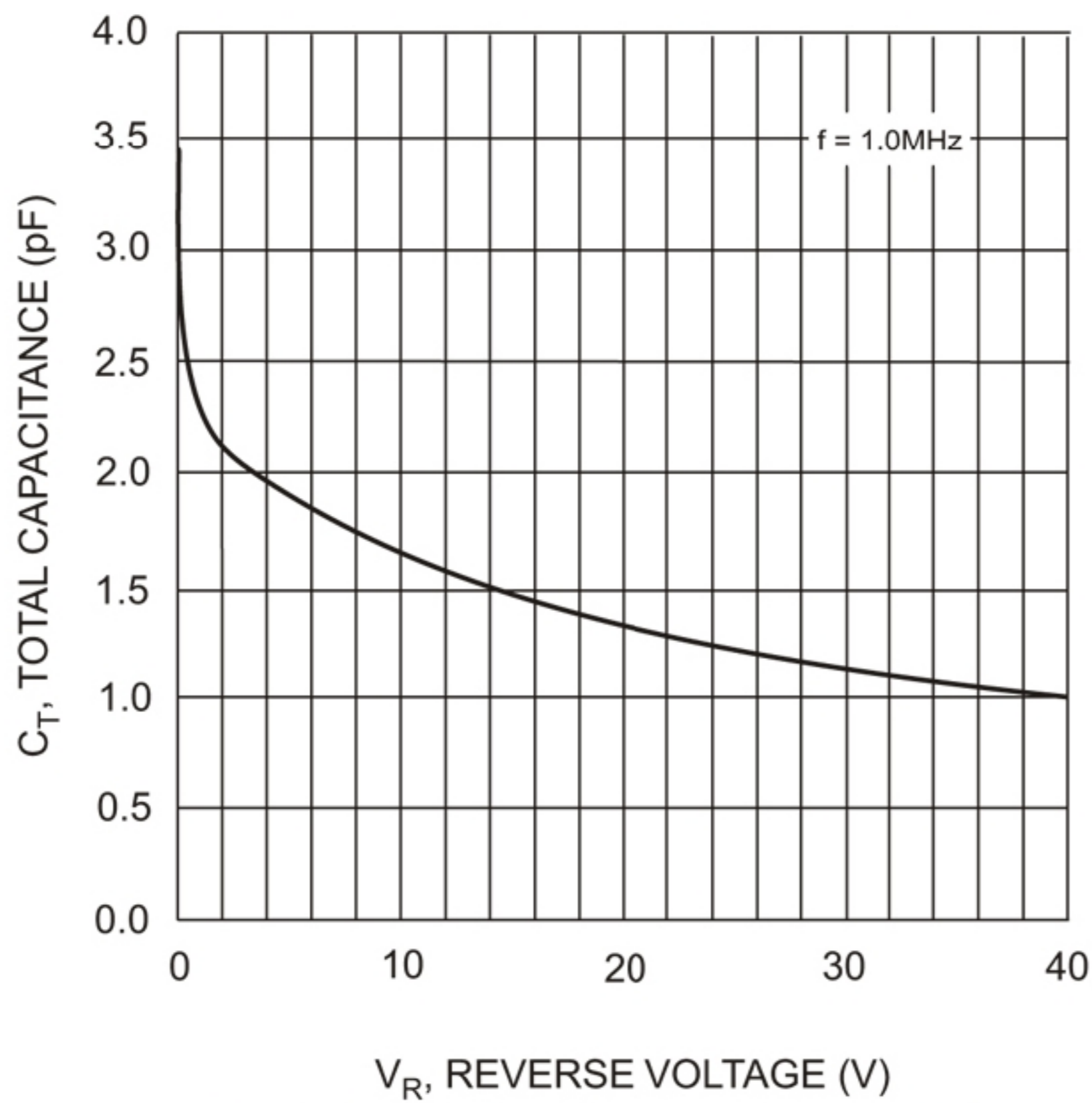


Fig. 3 Typical Capacitance vs. Reverse Voltage

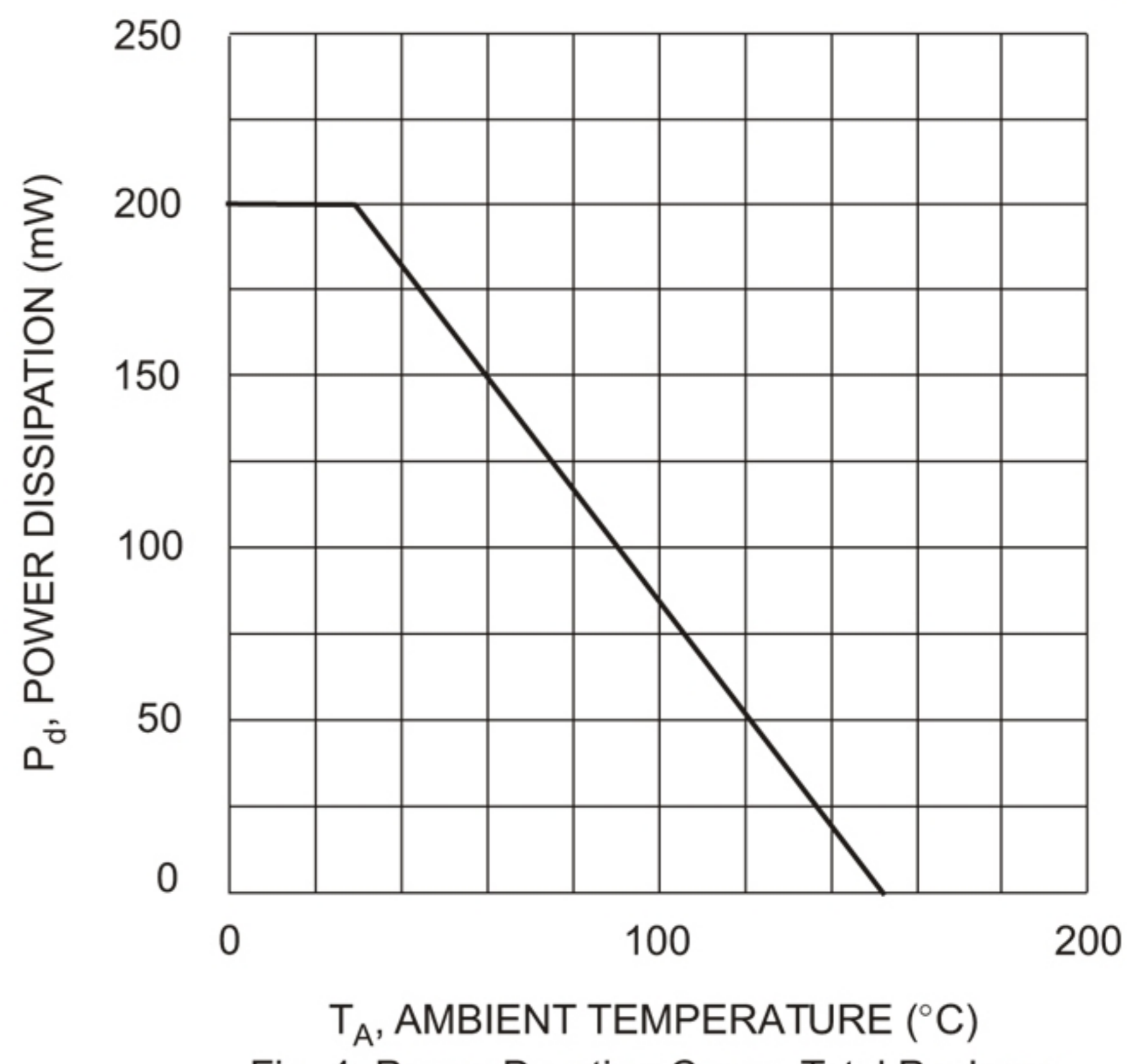


Fig. 4 Power Derating Curve, Total Package