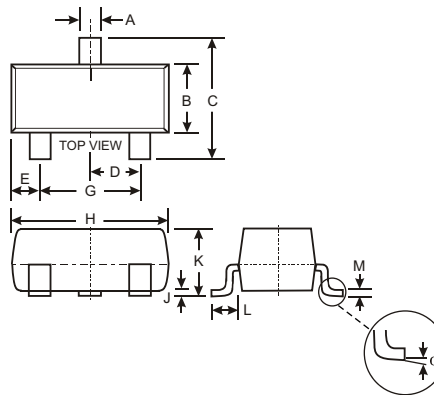
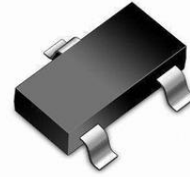


### Features

- Very Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance

### Mechanical Data

- Case: SOT-23, Plastic
- Case material - UL Flammability Rating Classification 94V-0
- Leads: Solderable per MIL-STD-202, Method 208
- Marking: S20
- Weight: 0.004 grams (approx.)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.85	0.80
$\alpha$	0°	8°
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	SDM40E20LS	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	20	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	V
Forward Continuous Current (Note 1)	$I_{FM}$	0.4	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	2	A
Power Dissipation (Note 1)	$P_d$	225	mW
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	444	$^\circ\text{C/W}$
Power Dissipation (Note 2)	$P_d$	300	mW
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	333	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +125	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Reverse Breakdown Voltage (Note 3)	$V_{(BR)R}$	20	—	—	V	$I_R = 0.5\text{mA}$
Forward Voltage Drop (Note 3)	$V_F$	—	—	0.310 0.430	V	$I_F = 0.1\text{A}$ $I_F = 0.5\text{A}$
Leakage Current (Note 3)	$I_R$	—	—	100 250	$\mu\text{A}$	$V_R = 10\text{V}$ $V_R = 20\text{V}$
Total Capacitance	$C_T$	—	170	—	pF	$f = 1\text{MHz}, V_r = 0\text{VDC}$

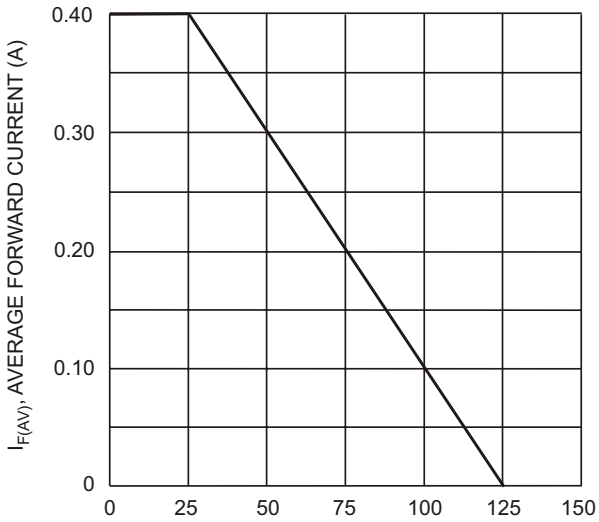


Fig. 1 Forward Current Derating Curve

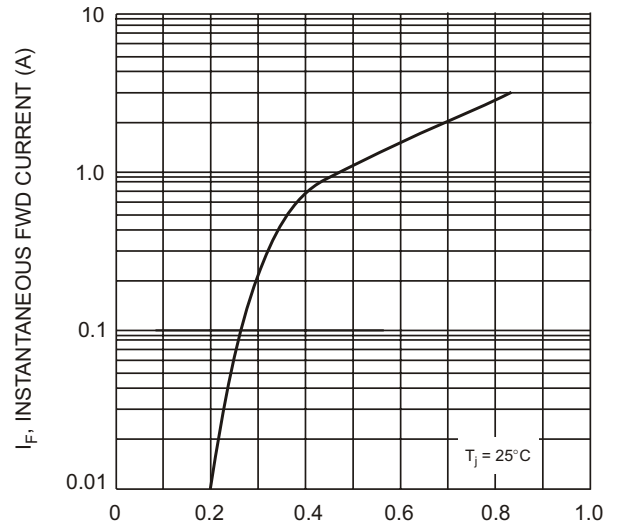


Fig. 2 Typical Forward Characteristics

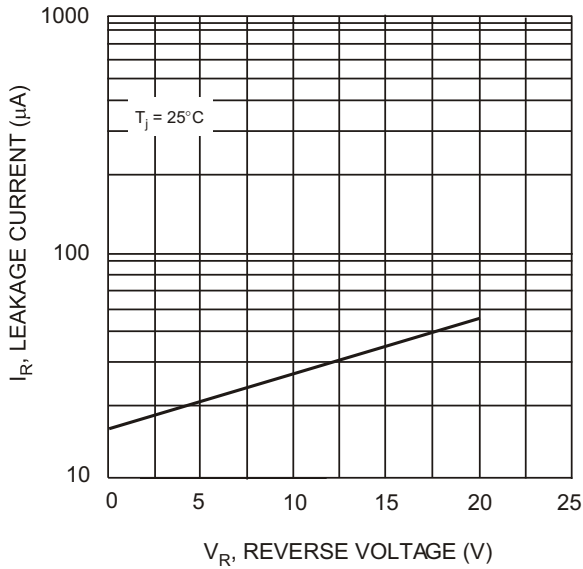


Fig. 3 Typical Reverse Characteristics

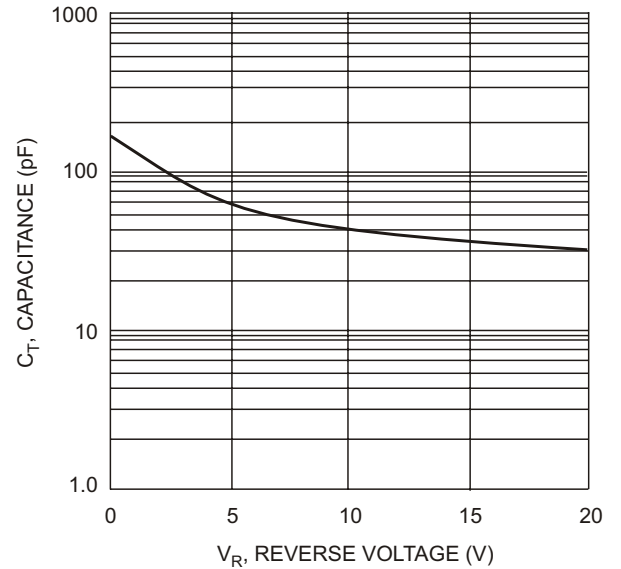


Fig. 4 Typ. Total Capacitance vs Reverse Voltage