

Features

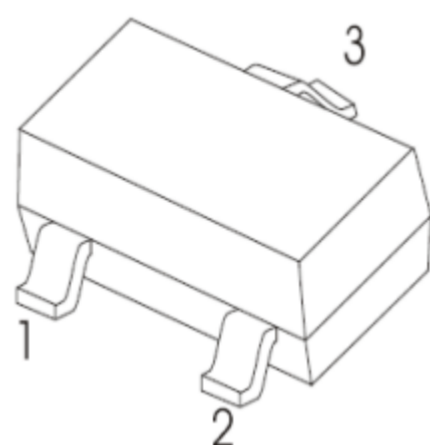
- General rectification
- Low V_F ; Low I_R
- High reliability

Applications

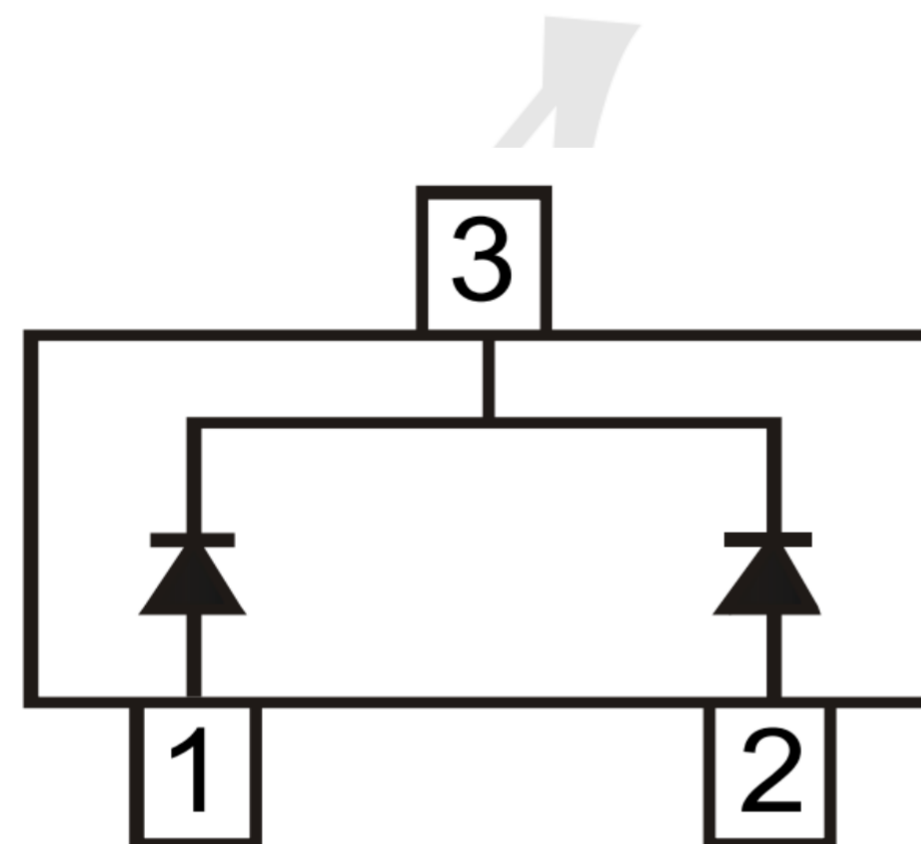
surface mount schottky barrier rectifier

Ordering Information

Shipping Qty:3000/7inch Tape& Reel



SOT523



BAT54CT

Absolute Maximum Ratings($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Limits	Unit
Peak Repetitive Peak reverse voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Reverse Voltage	V_R		
Forward Continuous Current	I_F	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Forward surge current@ $t_p < 1\text{s}$	I_{FSM}	600	mA
Power Dissipation *	P_D	150	mW
* part mounted on FR-4 board with recommended pad layout			

Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal resistance junction to ambient air	$R_{\theta JA}$	667	$^\circ\text{C/W}$
Junction temperature	T_J	125	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	30			V
Forward voltage *1	V_F	$I_F=0.1\text{mA}$			0.24	V
		$I_F=1\text{mA}$			0.32	V
		$I_F=10\text{mA}$			0.40	V
		$I_F=30\text{mA}$			0.50	V
		$I_F=100\text{mA}$			1.00	V
Reverse current *2	I_R	$V_R=25\text{V}$			2	μA
Capacitance Between Terminals	C_T	$V_R=1\text{V}, f=1\text{MHz}$			10	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1I_R, R_L=100\Omega$			5	ns
*1: pulse test, $t_p \leq 300\mu\text{s}$ *2: pulse test, $t_p \leq 5\text{ms}$						

Typical Electrical Characteristic Curves

FIG 1.TYPICAL REVERSE CHARACTERISTIC

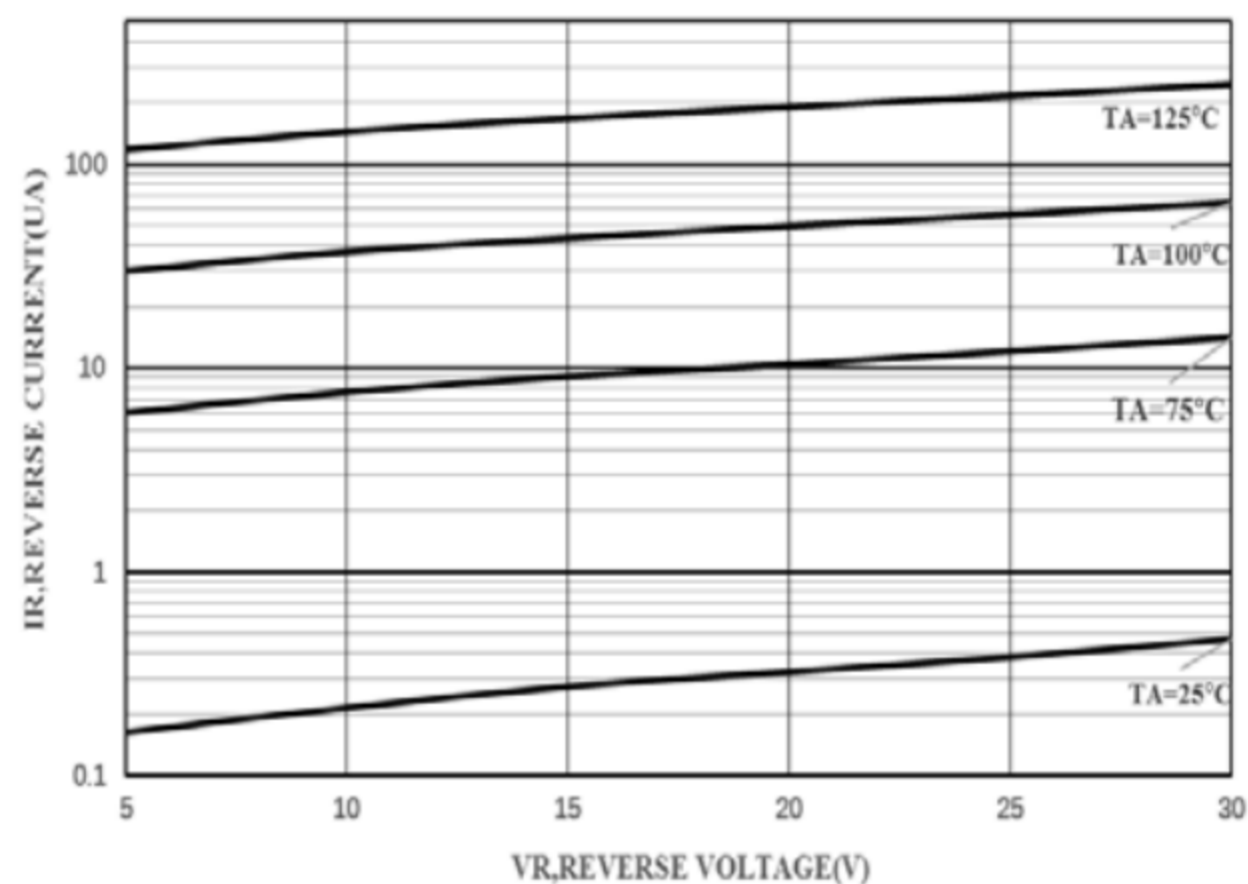


FIG 2.TYPICAL FORWARD CHARACTERISTIC

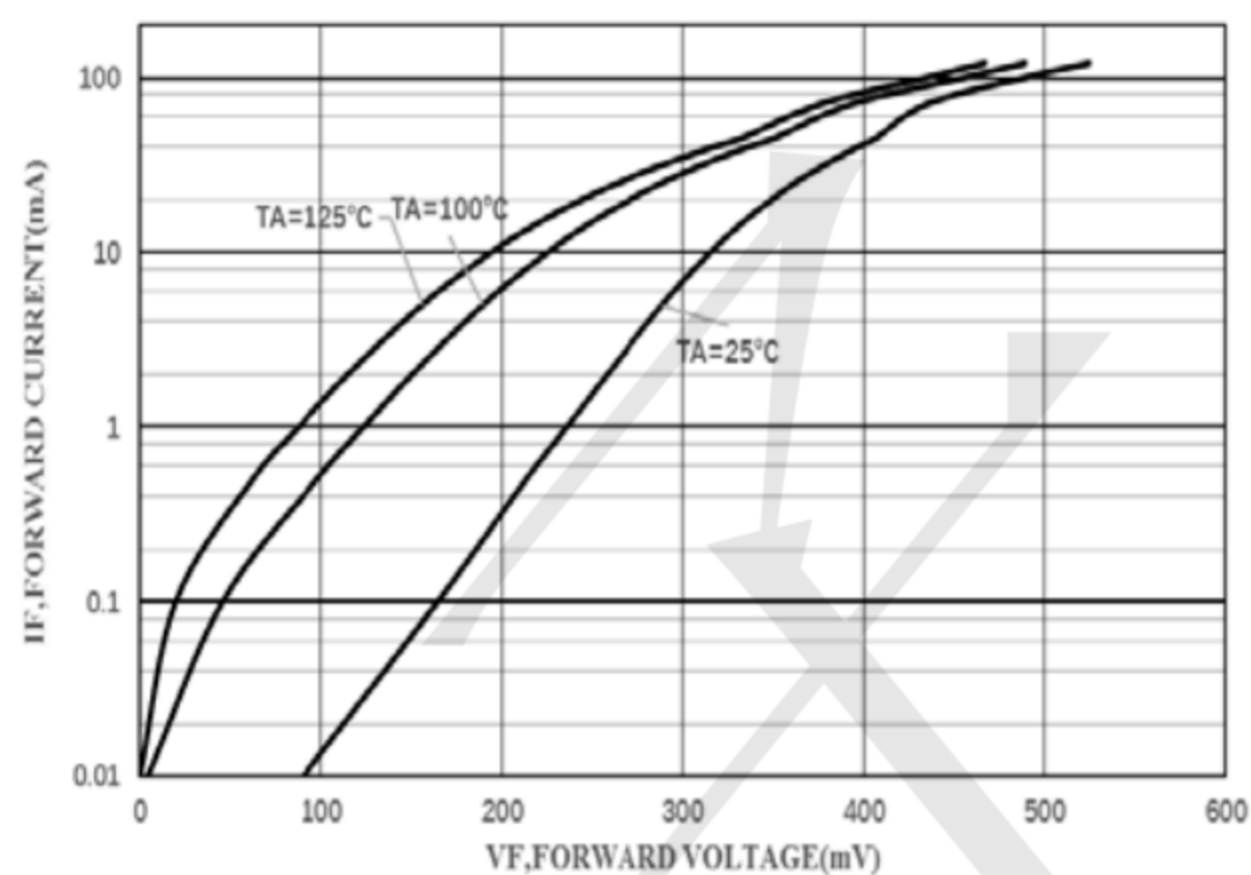


FIG 3.CAPACITANCE VS REVERSE VOLTAGE

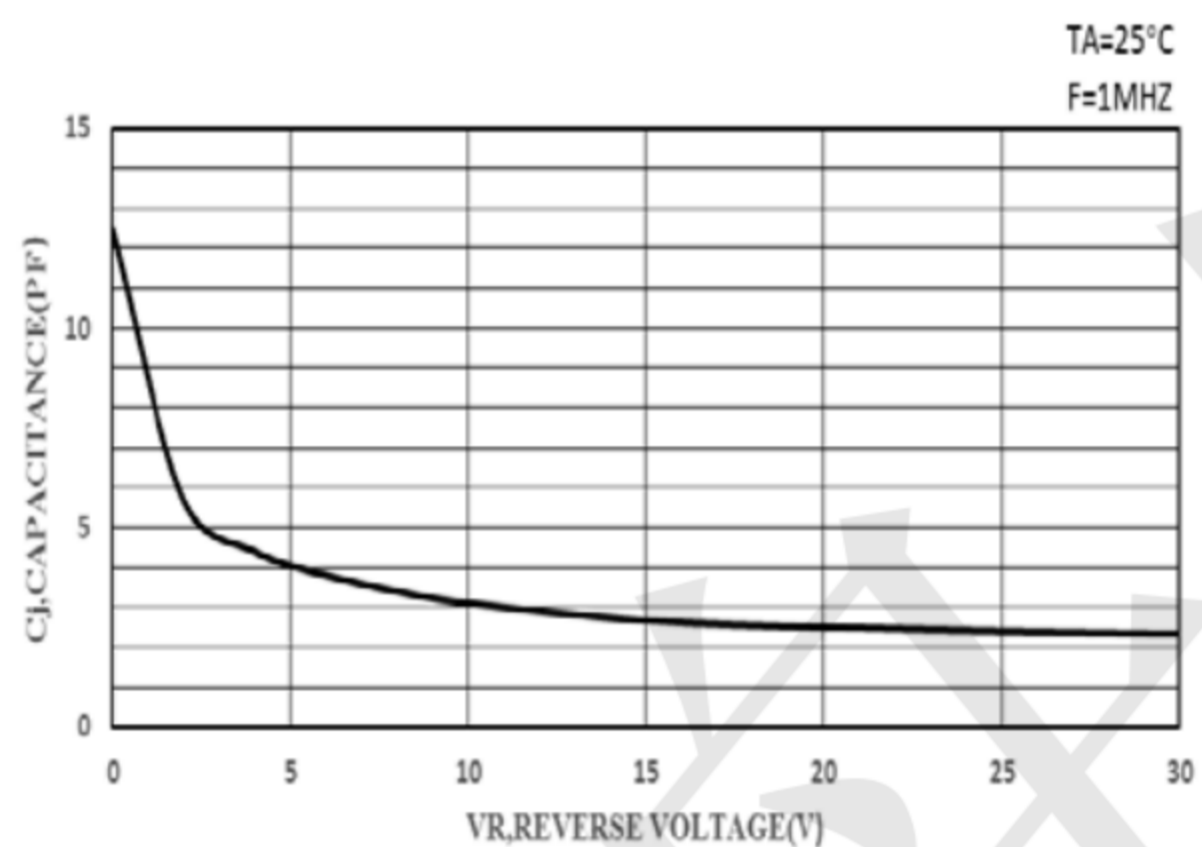
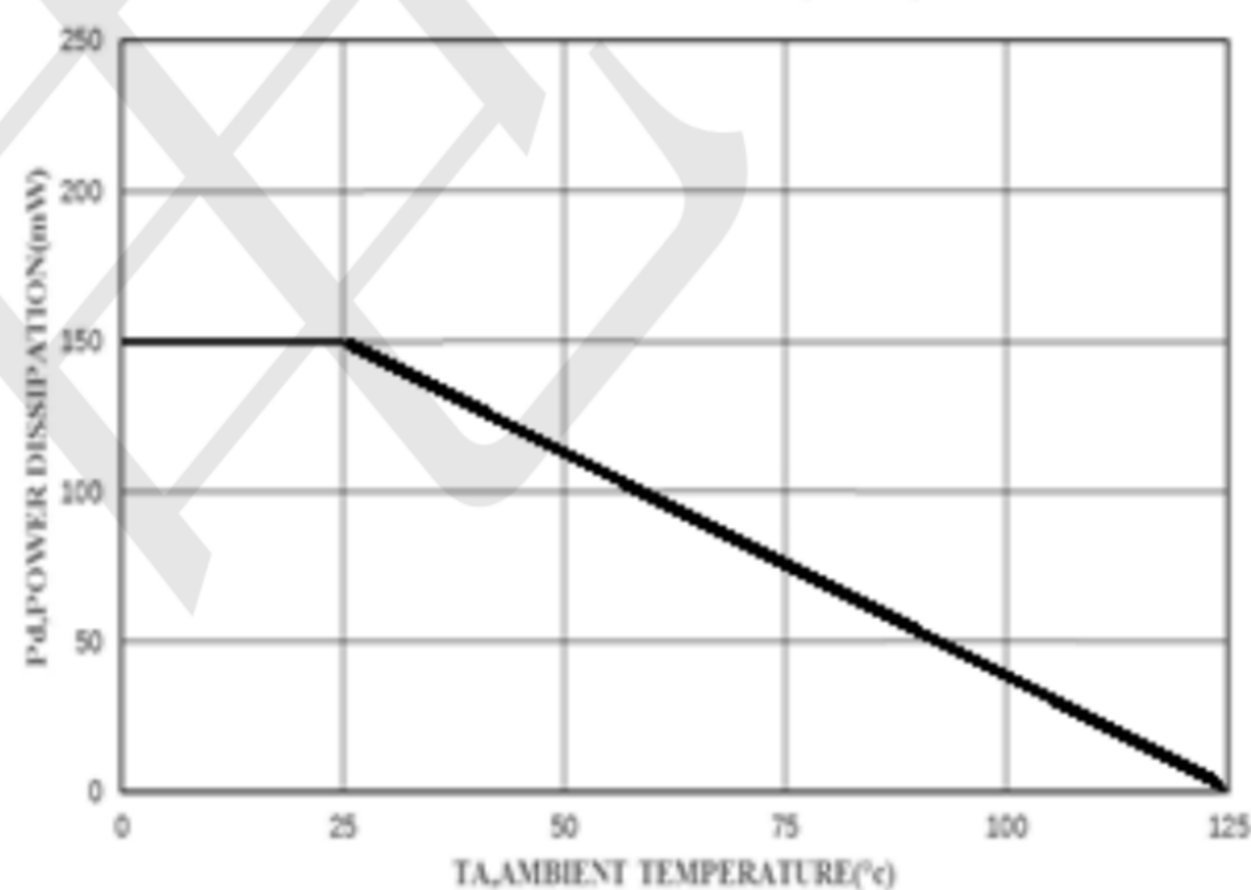
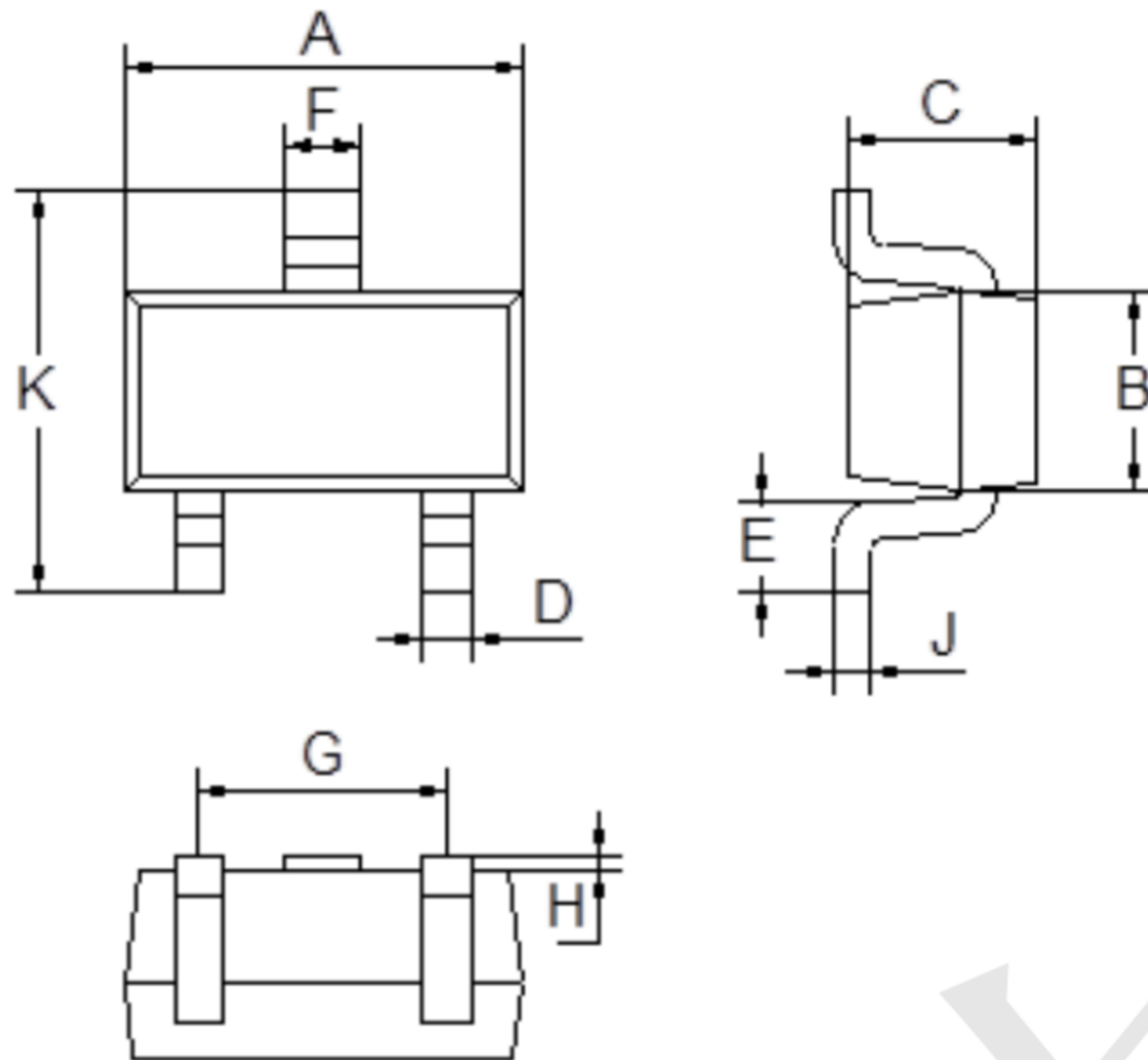


FIG 4.DERATING CURVE(P_d - T_A)



Outline Drawing - SOT523 (unit: mm)



SOT-523		
Dim	Min	Max
A	1.50	1.70
B	0.75	0.85
C	0.60	0.80
D	0.15	0.30
E	0.30	0.40
F	0.25	0.40
G	0.90	1.10
H	0.02	0.10
J	0.08	0.18
K	1.45	1.75

Mounting Pad Layout-SOT523(unit: mm)

