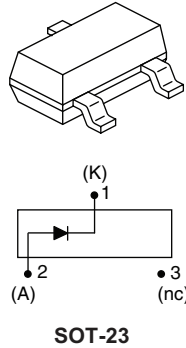


Schottky Diode, 0.2 A



FEATURES

- Small foot print, surface mountable
- Very low forward voltage drop
- Extremely fast switching speed for high frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Designed and qualified for industrial level

DESCRIPTION

This Schottky barrier diode is designed for high speed switching applications, voltage clamping and circuit protection. Miniature surface mount packages with reduced foot print are excellent for portable applications where space is limited.

PRODUCT SUMMARY

$I_{F(AV)}$	0.2 A
V_R	30 V

MAJOR RATINGS AND CHARACTERISTICS

SYMBOL	CHARACTERISTICS	VALUES	UNITS
I_F	DC	0.2	A
V_{RRM}		30	V
I_{FSM}	$t_p = 10$ ms sine	1.0	A
V_F	30 mA DC, $T_J = 25$ °C	0.5	V
P_d	Power dissipation at $T_A = 25$ °C	200	mW
T_J	Range	- 65 to 150	°C

VOLTAGE RATINGS

PARAMETER	SYMBOL	BAT54	UNITS
Maximum DC reverse voltage	V_R	30	V
Maximum working peak reverse voltage	V_{RWM}		

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	TEST CONDITIONS	VALUES	UNITS
Forward current	I_F	DC	0.2	A
Maximum peak one cycle non-repetitive surge current at $T_J = 25$ °C	I_{FSM}	5 μ s sine or 3 μ s rect. pulse	8.4	
		10 ms sine or 6 ms rect. pulse	1.0	



ELECTRICAL SPECIFICATIONS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum forward voltage drop	$V_{FM}^{(1)}$	0.1 A	$T_J = 25\text{ }^\circ\text{C}$	0.65	V
		30 mA		0.50	
		10 mA		0.40	
		1 mA		0.32	
		0.1 mA		0.24	
Maximum reverse leakage current	$I_{RM}^{(1)}$	$V_R = 25\text{ V}$		2	μA
		$V_R = 30\text{ V}$		3	
Maximum junction capacitance	C_T	$V_R = 1\text{ V}_{DC}$ (test signal range 100 kHz to 1 MHz), $T_J = 25\text{ }^\circ\text{C}$		10	pF
Maximum voltage rate of change	dV/dt	Rated V_R		10 000	V/ μs

Note

(1) Pulse width < 300 μs , duty cycle < 2 %

THERMAL - MECHANICAL SPECIFICATIONS					
PARAMETER	SYMBOL	TEST CONDITIONS		VALUES	UNITS
Maximum junction and storage temperature range	$T_J^{(1)}, T_{Stg}$			- 65 to 150	$^\circ\text{C}$
Maximum thermal resistance, junction to ambient	R_{thJA}	Mounted on PC board FR4 with minimum pad size		500	$^\circ\text{C/W}$
Approximate weight				0.008	g
Marking device		Case style SOT-23		EY $\overline{\text{WLC}}$	

Note

(1) $\frac{dP_{tot}}{dT_J} < \frac{1}{R_{thJA}}$ thermal runaway condition for a diode on its own heatsink

BAT54

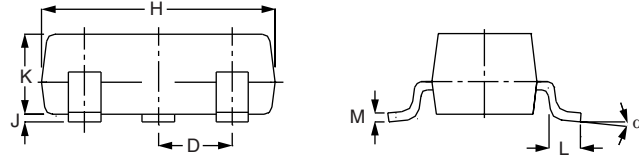
Vishay High Power Products Schottky Diode, 0.2 A



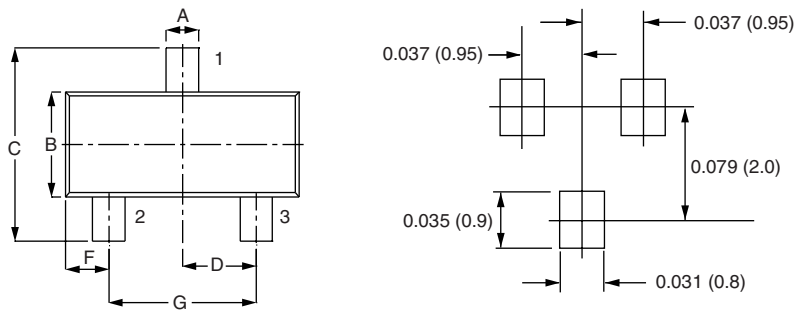
ORDERING INFORMATION TABLE					
DEVICE	PACKAGE	MARKING	CONFIGURATION	BASE QUANTITY	DELIVERY MODE
BAT54	SOT-23	EYWLC	Single	3000	Tape and reel

SOT-23

DIMENSIONS in millimeters (inches)



Soldering pad



SYMBOL	MILLIMETERS		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.37	0.51	0.015	0.020
B	1.20	1.40	0.047	0.055
C	2.30	2.50	0.091	0.098
D	0.89	1.03	0.035	0.041
F	0.45	0.60	0.018	0.024
H	2.80	3.00	1.110	0.118
J	0.013	0.10	0.001	0.004
K	0.89	1.10	0.035	0.043
L	0.45	0.61	0.018	0.024
M	0.09	0.18	0.003	0.007
α	8°		8°	

SOT SOD (BAT, MBR05 Series)

TAPE AND REEL INFORMATION

