

BAT165WS

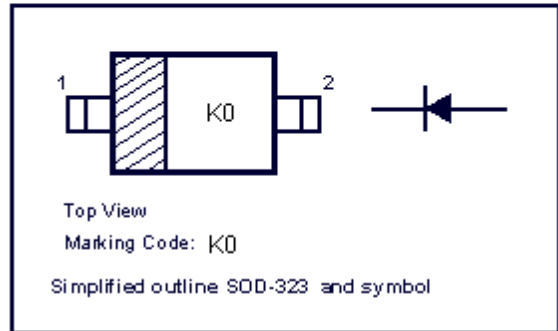
SCHOTTKY BARRIER DIODE

Features

- Medium current schottky rectifier diode
- For low-loss, fast-recovery, meter protection, bias isolation and clamping applications

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

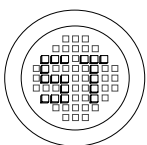


Absolute Maximum Ratings ($T_j = 25^\circ\text{C}$)

Parameter	Test	Symbol	Value	Unit
Reverse Voltage		V_R	40	V
Surge Forward Current	$t \leq 10\text{ms}$	I_{FSM}	2.5	A
Average forward current (50/60Hz, sinus)		I_{FAV}	500	mA
Forward Current		I_F	750	mA
Total Power Dissipation	$T_s \leq 66^\circ\text{C}$	P_{tot}	600	mW
Junction Temperature		T_J	150	$^\circ\text{C}$
Storage Temperature Range		T_s	-65 ... +150	$^\circ\text{C}$

Maximum Thermal Resistance ($T_j = 25^\circ\text{C}$)

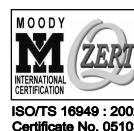
Parameter	Symbol	Value	Unit
Junction – soldering point	R_{thJS}	140	K/W



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ISO/TS 16949 : 2002
Certificate No. 05103

ISO 14001:2004
Certificate No. 7116

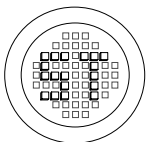
ISO 9001:2000
Certificate No. 050698

Dated : 12/03/2005

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Characteristics at $T_j = 25^\circ\text{C}$

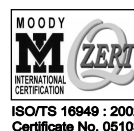
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Forward Voltage	$I_F = 10\text{mA}$	V_F	-	0.305	0.4	V
	$I_F = 100\text{mA}$	V_F	-	0.38	-	V
	$I_F = 250\text{mA}$	V_F	-	0.44	0.7	V
	$I_F = 750\text{mA}$	V_F	-	0.58	-	V
Reverse Current	$V_R = 30\text{V}$	I_R	-	-	50	μA
	$V_R = 30\text{V}, T_A = 65^\circ\text{C}$		-	-	900	
Diode Capacitance	$V_R = 10\text{V}, f = 1\text{MHz}$	C_T	-	8.4	12	pF



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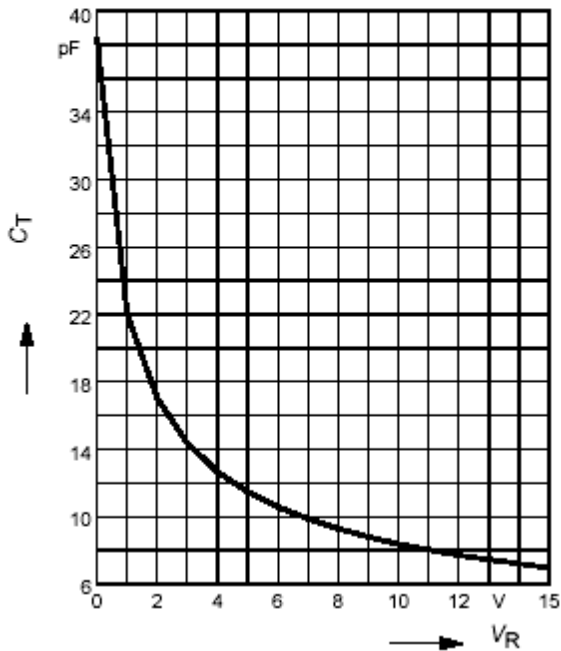


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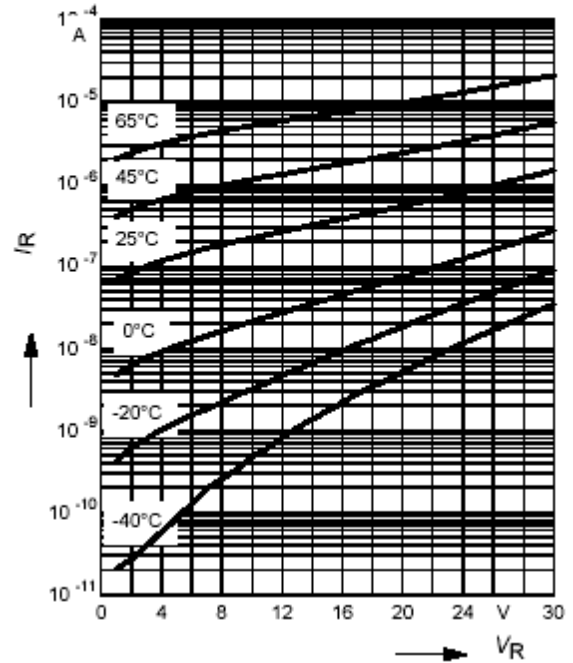
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



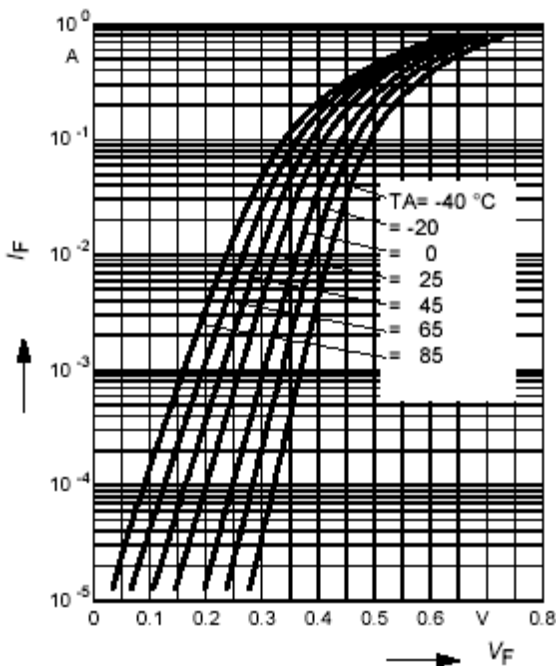
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$

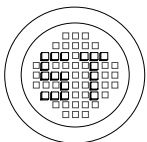
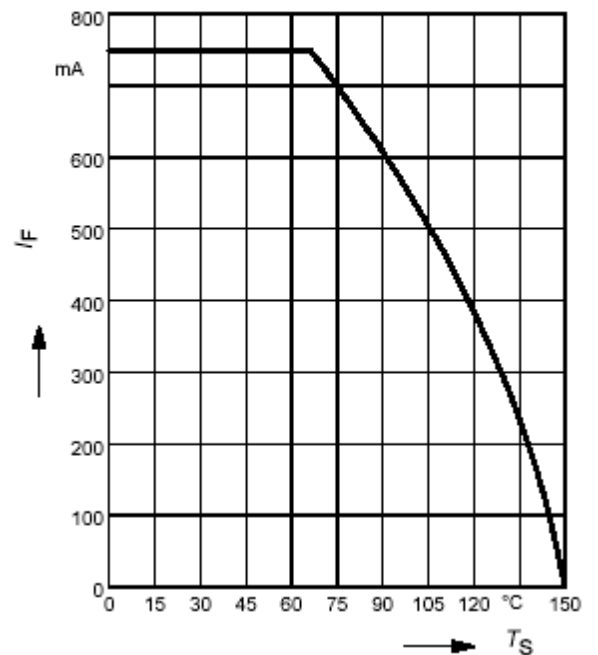


Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



Forward current $I_F = f(T_S)$



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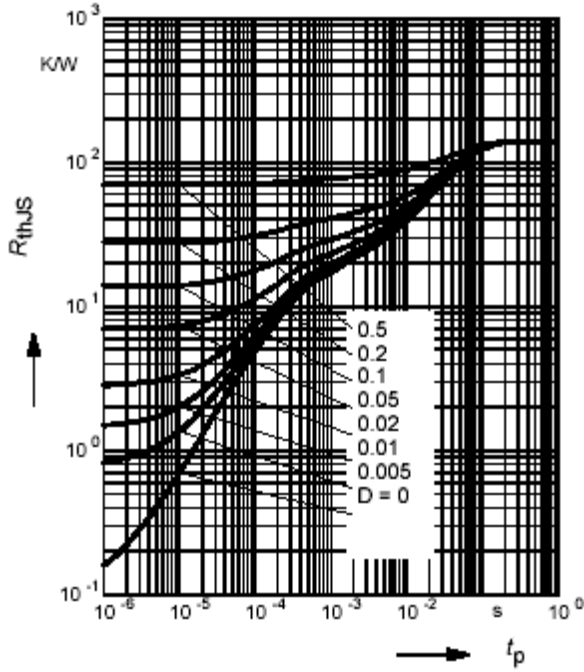
ISO/TS 16949:2002 Certificate No. 05103

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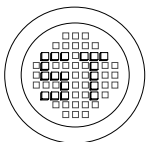
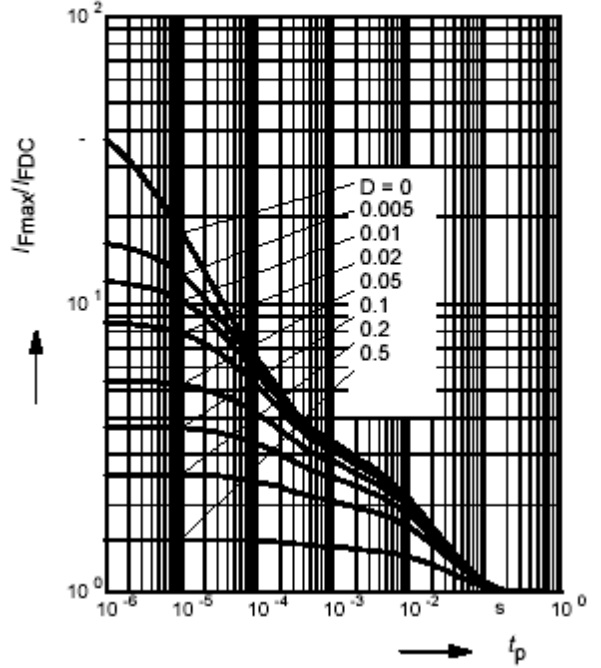
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Permissible Puls Load $R_{thJS} = f(t_p)$



Permissible Pulse Load

$I_{Fmax}/I_{FDC} = f(t_p)$



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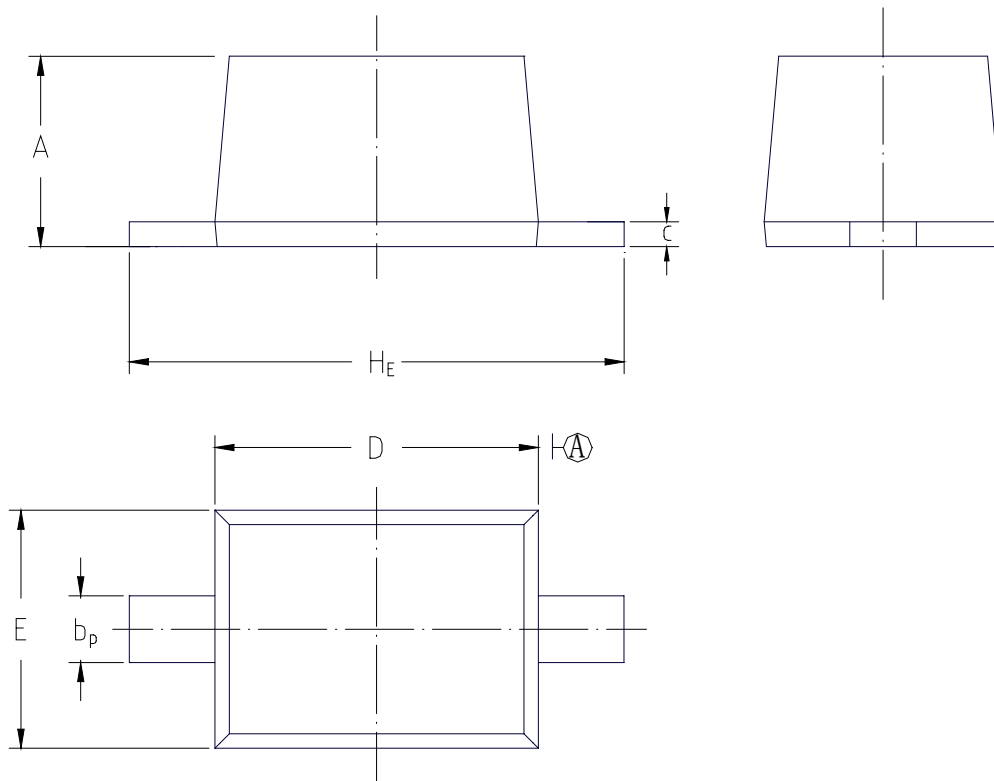
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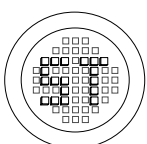
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



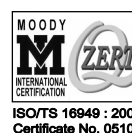
UNIT	A	b_p	c	D	E	H_E
mm	1.10 0.80	0.40 0.25	0.15 0.00	1.80 1.60	1.35 1.15	2.80 2.30



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