



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOD-323 Plastic-Encapsulate Diodes

BAS40WS

SCHOTTKY DIODES

FEATURES

- LOW Turn-on Voltage
- Fast Switching
- PN Junction Guard for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material –UL Recognition Flammability Classification 94V-O

SOD-323

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**MARKING: 43****Maximum Ratings and Electrical Characteristics, Single Diode @T_A=25**

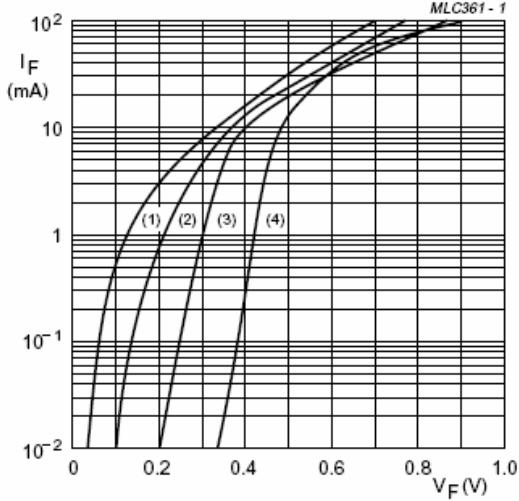
Parameter	Symbol	Limits		Unit
Peak Repetitive Peak reverse voltage	V _{RRM}			
Working Peak Reverse Voltage	V _{RWM}	40		V
DC Blocking Voltage	V _R			
Forward Continuous Current	I _F	200		mA
Peak forward surge current @<1.0s	I _{FSM}	600		mA
Power Dissipation	P _d	200		mW
Thermal Resistance Junction to Ambient	R _{θJA}	625		K/W
Storage temperature	T _{STG}	-55 to +150		°C

Electrical Ratings @T_A=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Breakdown Voltage	V _{(BR)R}	40			V	IR=10μA
Forward voltage	V _{F1}			0.38	V	I _F =1mA
	V _{F2}			0.5	V	I _F =10mA
	V _{F3}			1	V	I _F =40mA
Reverse current	I _R		20	200	nA	V _R =30V
Capacitance between terminals	C _T		4	5	pF	V _R =0V,f=1MHz
Reverse Recovery Time	t _{rr}			5	ns	I _F =I _R =10mA I _{rr} =0.1XI _R ,R _L =100Ω

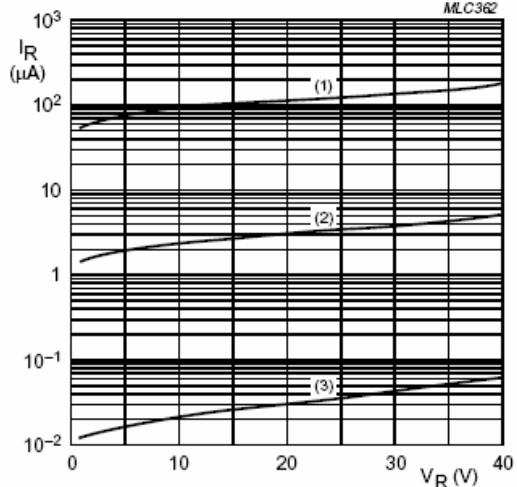
Typical Characteristics

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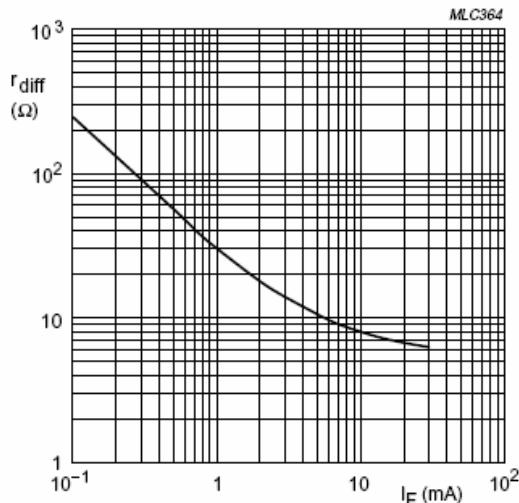
- (1) $T_{amb} = 150 \text{ }^{\circ}\text{C}.$
- (2) $T_{amb} = 85 \text{ }^{\circ}\text{C}.$
- (3) $T_{amb} = 25 \text{ }^{\circ}\text{C}.$
- (4) $T_{amb} = -40 \text{ }^{\circ}\text{C}.$

Fig.1 Forward current as a function of forward voltage; typical values.



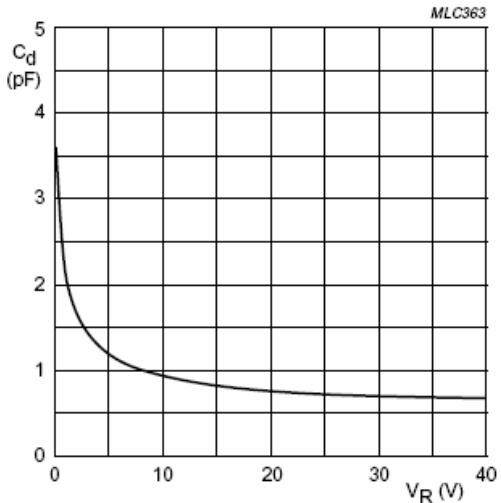
- (1) $T_{amb} = 150 \text{ }^{\circ}\text{C}.$
- (2) $T_{amb} = 85 \text{ }^{\circ}\text{C}.$
- (3) $T_{amb} = 25 \text{ }^{\circ}\text{C}.$

Fig.2 Reverse current as a function of reverse voltage; typical values.



$f = 10 \text{ KHz.}$

Fig.3 Differential forward resistance as a function of forward current; typical values.



$f = 1 \text{ MHz}; T_{amb} = 25 \text{ }^{\circ}\text{C.}$

Fig.4 Diode capacitance as a function of reverse voltage; typical values.