

Vishay Semiconductors

Small Signal Schottky Diode



FEATURES





• This diode features low turn-on voltage and high breakdown voltage. This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges

• This diode is also available in a MiniMELF case

HALOGEN FREE

with type designation LL41

• Material categorization: for definitions of compliance please see www.vishav.com/doc?99912

LINKS TO ADDITIONAL RESOURCES









MECHANICAL DATA

Case: DO-35 (DO-204AH) Weight: approx. 125 mg Cathode Band Color: black **Packaging Codes/Options:**

TR/10K per 14" reel (52 mm tape), 50K/box TAP/10K per ammopack (52 mm tape), 50K/box

PARTS TABLE						
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS		
BAT41	BAT41-TR or BAT41-TAP	Single	BAT41	Tape and reel/ammopack		

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage		V_{RRM}	100	V	
Forward continuous current (1)		I _F	100	mA	
Repetitive peak forward current (1)	$t_p < 1 \text{ s, } \delta < 0.5$	I _{FRM}	350	mA	
Surge forward current (1)	t _p = 10 ms	I _{FSM}	750	mA	
Power dissipation (1)	T _{amb} = 65 °C	P _{tot}	200	mW	

Note

⁽¹⁾ Valid provided that electrodes are kept at ambient temperature

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air	Valid provided that electrodes are kept at ambient temperature	R_{thJA}	300	K/W	
Junction temperature		T _i	125	°C	
Ambient operating temperature range		T_{amb}	-65 to +125	°C	
Storage temperature range		T _{stg}	-65 to +150	°C	

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage (1)	I _R = 100 μA	V _(BR)	100	110		V
Leakage current (1)	$V_R = 50 \text{ V}, T_j = 25 \text{ °C}$	I _R			100	nA
Leakage current (1)	$V_R = 50 \text{ V}, T_j = 100 \text{ °C}$	I _R			20	μA
Forward voltage (1)	I _F = 1 mA	V_{F}		400	450	mV
i diward voitage 🖙	$I_F = 200 \text{ mA}$	V_{F}			1000	mV
Diode capacitance	$V_R = 1 V, f = 1 MHz$	C _D		2		pF

Note

⁽¹⁾ Pulse test, $t_p = 300 \mu s$



TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

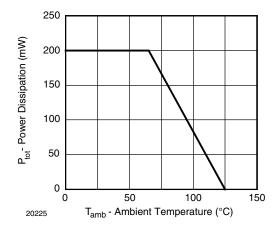


Fig. 1 - Admissible Power Dissipation vs. Ambient Temperature

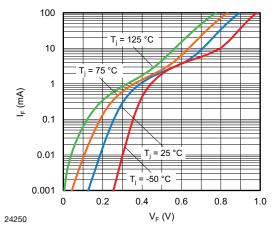


Fig. 3 - Typical Forward Current vs. Forward Voltage

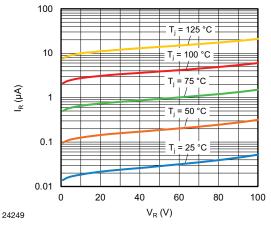


Fig. 2 - Typical Reverse Leakage Current vs. Reverse Voltage

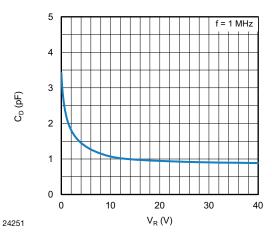
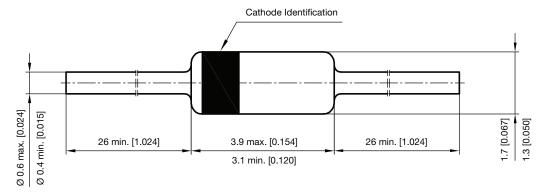


Fig. 4 - Typical Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): DO-35 (DO-204AH)



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