BYT51A, BYT51B, BYT51D, BYT51G, BYT51J, BYT51K, BYT51M



Standard Avalanche Sinterglass Diode



MECHANICAL DATA

Case: SOD-57 Terminals: plated axial leads, solderable per MIL-STD-750, method 2026 Polarity: color band denotes cathode end Mounting position: any Weight: approx. 369 mg

FEATURES

- Glass passivated junction
- Hermetically sealed package
- Low reverse current
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

APPLICATIONS

• Rectification diode

PARTS TABLE		
PART	TYPE DIFFERENTIATION	PACKAGE
BYT51A	V _R = 50 V; I _{FAV} = 1.5 A	SOD-57
BYT51B	V _R = 100 V; I _{FAV} = 1.5 A	SOD-57
BYT51D	V _R = 200 V; I _{FAV} = 1.5 A	SOD-57
BYT51G	V _R = 400 V; I _{FAV} = 1.5 A	SOD-57
BYT51J	V _R = 600 V; I _{FAV} = 1.5 A	SOD-57
BYT51K	V _R = 800 V; I _{FAV} = 1.5 A	SOD-57
BYT51M	V _R = 1000 V; I _{FAV} = 1.5 A	SOD-57

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
Reverse voltage = repetitive peak reverse voltage		BYT51A	$V_{R} = V_{RRM}$	50	V	
		BYT51B	$V_{R} = V_{RRM}$	100	V	
		BYT51D	$V_{R} = V_{RRM}$	200	V	
	See electrical characteristics	BYT51G	$V_{R} = V_{RRM}$	400	V	
		BYT51J	$V_{R} = V_{RRM}$	600	V	
		BYT51K	$V_{R} = V_{RRM}$	800	V	
		BYT51M	$V_{R} = V_{RRM}$	1000	V	
Peak forward surge current	t _p = 10 ms, half sine wave		I _{FSM}	50	A	
Repetitive peak forward current			I _{FRM}	9	A	
Average forward current	On PC board		I _{FAV}	1	A	
	l = 10mm		I _{FAV}	1.5	A	
Junction and storage temperature range			$T_j = T_{stg}$	- 55 to + 175	°C	
Non repetitive reverse avalanche energy	I _{(BR)R} = 1 A		E _R	20	mJ	



RoHS

COMPLIANT HALOGEN

FREE

BYT51A, BYT51B, BYT51D, BYT51G, BYT51J, BYT51K, BYT51M



Standard Avalanche Sinterglass Diode



MAXIMUM THERMAL RESISTANCE ($T_{amb} = 25 \text{ °C}$, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Junction ambient	Lead length I = 10 mm, T_L = constant	R _{thJA}	45	K/W	
	On PC board with spacing 25 mm	R _{thJA}	100	K/W	

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX	UNIT
Forward voltage	I _F = 1 A		V _F	-	0.95	1.1	V
	I _F = 1 A, T _j = 175 °C		V _F	-	-	1	V
Reverse current	$V_{R} = V_{RRM}$		I _R	-	-	1	μA
	$V_R = V_{RRM}, T_j = 150 \text{ °C}$		I _R	-	-	100	μA
Reverse recovery time	I _F = 0.5 A, I _R = 1 A, i _R = 0.25 A		t _{rr}	-	-	4	μs

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



Fig. 1 - Typ. Thermal Resistance vs. Lead Length



Fig. 2 - Forward Current vs. Forward Voltage



Ambient Temperature



Fig. 4 - Reverse Current vs. Junction Temperature



PACKAGE DIMENSIONS in millimeters (inches): SOD-57



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