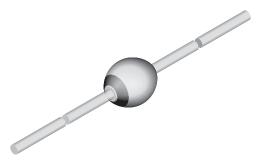


BYT54A, BYT54B, BYT54D, BYT54G, BYT54J, BYT54K, BYT54M

www.vishay.com

Vishay Semiconductors

Fast Avalanche Sinterglass Diode



FEATURES

- Glass passivated junction
- · Hermetically sealed package
- · Low reverse current
- · Soft recovery characteristics
- · Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

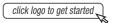


HALOGEN

FREE

949539

DESIGN SUPPORT TOOLS



MECHANICAL DATA

Case: SOD-57

Models Available

Terminals: plated axial leads, solderable per MIL-STD-750,

method 2026

Polarity: color band denotes cathode end

Mounting position: any Weight: approx. 369 mg

APPLICATIONS

· Very fast rectification and switching diodes

ORDERING INFORMATION (Example)					
DEVICE NAME	MINIMUM ORDER QUANTITY				
BYT54M	BYT54M-TR	5000 per 10" tape and reel	25 000		
BYT54M	BYT54M-TAP	5000 per ammopack	25 000		

PARTS TABLE					
PART	TYPE DIFFERENTIATION	PACKAGE			
BYT54A	V _R = 50 V; I _{F(AV)} = 1.25 A	SOD-57			
BYT54B	V _R = 100 V; I _{F(AV)} = 1.25 A	SOD-57			
BYT54D	V _R = 200 V; I _{F(AV)} = 1.25 A	SOD-57			
BYT54G	$V_R = 400 \text{ V}; I_{F(AV)} = 1.25 \text{ A}$	SOD-57			
BYT54J	$V_R = 600 \text{ V}; I_{F(AV)} = 1.25 \text{ A}$	SOD-57			
BYT54K	$V_R = 800 \text{ V}; I_{F(AV)} = 1.25 \text{ A}$	SOD-57			
BYT54M	V _R = 1000 V; I _{F(AV)} = 1.25 A	SOD-57			

BYT54A, BYT54B, BYT54D, BYT54G, BYT54J, BYT54K, BYT54M

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ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT		
		BYT54A	$V_R = V_{RRM}$	50	V		
		BYT54B	$V_R = V_{RRM}$	100	V		
		BYT54D	$V_R = V_{RRM}$	200	V		
Reverse voltage = repetitive peak reverse voltage	See electrical characteristics	BYT54G	$V_R = V_{RRM}$	400	V		
10voloo voltage		BYT54J	$V_R = V_{RRM}$	600	V		
		BYT54K	$V_R = V_{RRM}$	800	V		
		BYT54M	$V_R = V_{RRM}$	1000	V		
Peak forward surge current	t _p = 10 ms, half sine wave		I _{FSM}	30	Α		
Average feminard animont	I = 10 mm		I _{F(AV)}	1.25	Α		
Average forward current	On PC board		I _{F(AV)}	0.75	А		
		BYT54J	E _R	10	mJ		
Non repetitive reverse avalanche energy	I _{(BR)R} = 0.4 A	BYT54K	E _R	10	mJ		
		BYT54M	E _R	10	mJ		
Junction and storage temperature range			$T_j = T_{stg}$	-55 to +175	°C		

MAXIMUM THERMAL RESISTANCE (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	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}	-	-	1.5	V
Reverse current	$V_R = V_{RRM}$		I _R	-	-	5	μΑ
	$V_R = V_{RRM}$, $T_j = 150$ °C		I _R	-	-	150	μΑ
Reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1 \text{ A}, I_R = 0.25 \text{ A}$		t _{rr}	-	-	100	ns

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

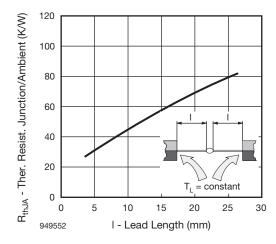


Fig. 1 - Max. Thermal Resistance vs. Lead Length

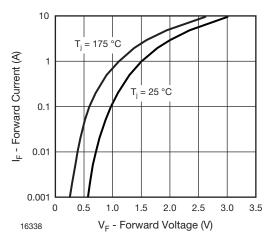


Fig. 2 - Forward Current vs. Forward Voltage

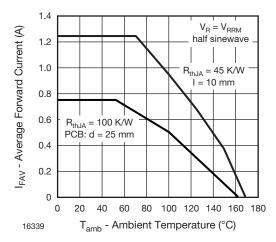


Fig. 3 - Max. Average Forward Current vs. Ambient Temperature

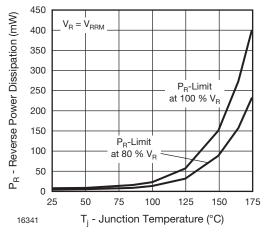


Fig. 5 - Max. Reverse Power Dissipation vs. Junction Temperature

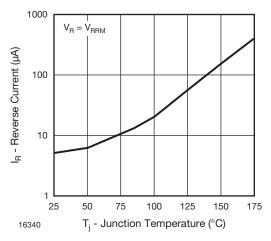


Fig. 4 - Max. Reverse Current vs. Junction Temperature

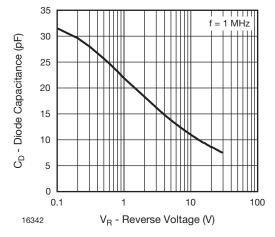
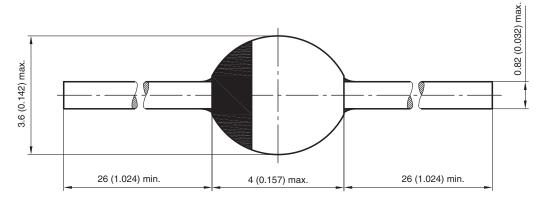


Fig. 6 - Diode Capacitance vs. Reverse Voltage

PACKAGE DIMENSIONS in millimeters (inches): SOD-57



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