

Common Mode BIS Series

Descriptions

Common Mode (CM) Boarden Isolated Surge (BIS) protection device is a semiconductor device developed for surge protection requirements of non-isolated LED drivers. Solution of BIS series connecting with MOVs can meet both isolation requirements and surge protection requirements. For class I LED devices, isolation requirement of electrical strength is $1000V+2U$ (U is rated work Voltage), this means the surge protections solutions should have peak reverse voltage rated up to $1000V+2U$, and thus the residual voltage is very high under 4KV or 6KV 1.2/50us & 8/20us surge waves for both L-PE and N-PE lines. Boarden CM BIS products family can significantly reduce the residual voltage hence protect the LED driver safe and reliable.

Features

- Meeting both insulation requirement and surge protection requirements
- Long life under repetitive surges
- Package: SMB
- High Working Voltages
- Bi-directional
- RoHS compliant
- TUV Rheinland Certificate: R50442482

Order Information

Package	Qty per Reel	Tape
SMB	3000	13" Reel

Maximum Ratings and Thermal Characteristics (TA=25°C unless otherwise noted)

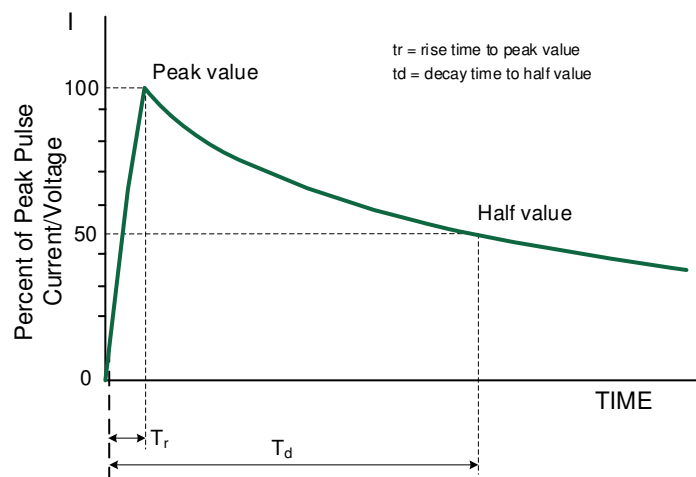
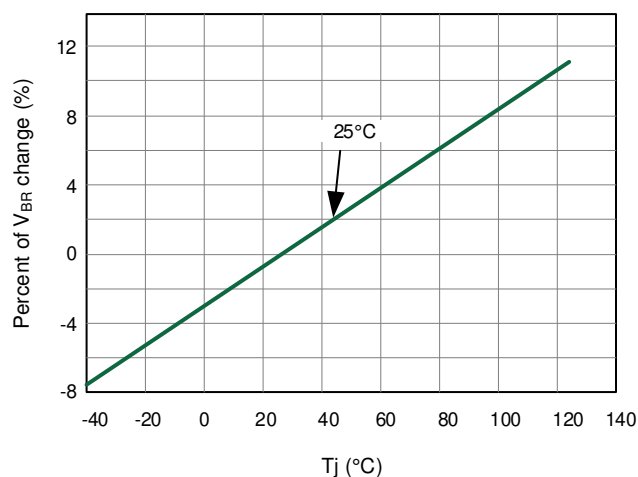
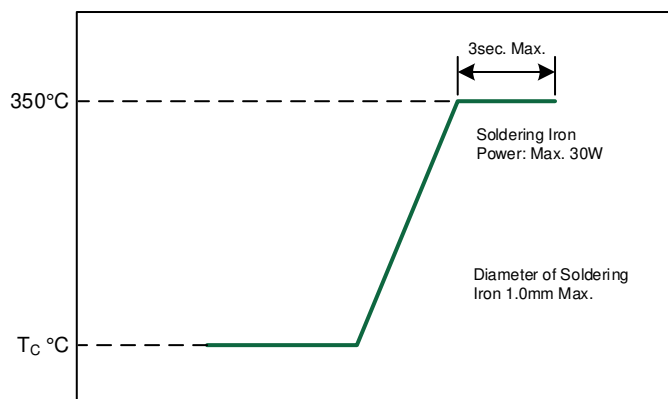
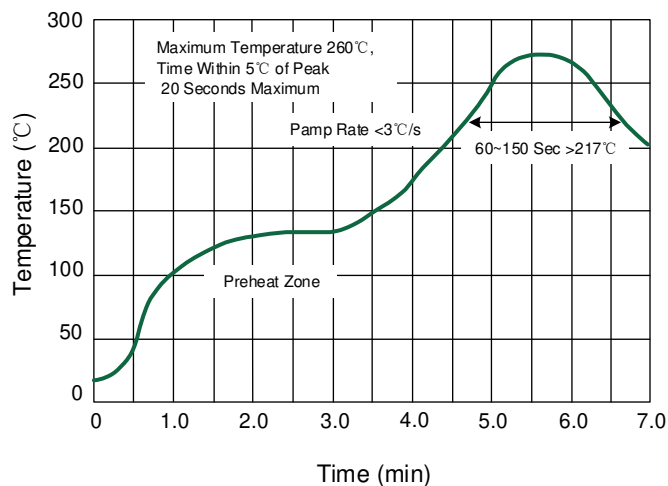
Parameter	Symbol	Value	Unit
Working Peak Reverse Voltage	V_R	1000	V
Normal Breakdown Voltage (Typ.)	V_{BR}	1360-1840	V
Operating Temperature Range	T_J	-40 to 125	°C
Storage Temperature Range	T_{STG}	-40 to 150	°C
Typical Thermal Resistance Junction to Lead	R_{uJL}	20	°C/W
Typical Thermal Resistance Junction to Ambient	R_{uJA}	100	°C/W

Device Ratings and Specifications (Tamb=25°C)

Part Number	Insulation Voltage (Vi)	Surge Starting Voltage (Vs)	Surge Capacity ¹⁾ (1.2/50μs & 8/20μs)		Cj	Package	Marking
	V	V	Open Circuit Voltage	Peak Pulse Current	pF		
	min	max	V	A	max		
BIS-DS602-S ²⁾	1600	2200	6000	500	100	SMB	b DS1

Note 1: Waveform 1.2/50μs & 8/20μs, Ri=12ohm

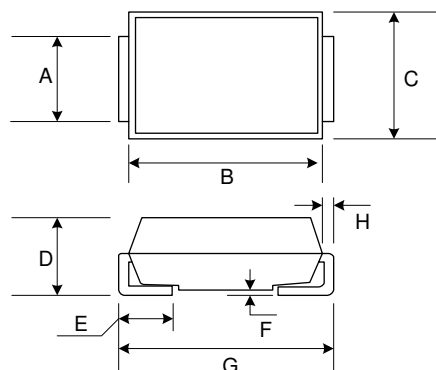
Note 2: For BIS-DS602-S, the parameters Vi and Vs are the total values of two components, for these two components should be used by pairs in series during installation.

Pulse Waveform - tr x td pulse waveform

Normalized V_{BR} change vs. Tj

Iron Soldering Profile

Lead-free Re-flow Solder Profile


Product Dimensions (mm)

SMB (DO-214AA)

Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.071	0.086	1.800	2.200
B	0.159	0.183	4.050	4.650
C	0.130	0.155	3.300	3.940
D	0.080	0.106	2.050	2.700
E	0.030	0.060	0.760	1.520
F	-	0.016	-	0.400
G	0.195	0.220	4.95	5.590
H	0.006	0.012	0.152	0.305



Marking System



© Boarden Electronics Ltd.

Specifications are subject to change without notice.

Website: www.boarden.com.cn

Tel: 86-21-61401058

Fax: 86-21-61730538