

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: SMC
- High Working Voltages
- Bi-directional
- RoHS compliant
- TUV Rheinland Certificate: R50442482

Order Information

Package	Qty per Reel	Tape
SMC	500	7" Reel

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

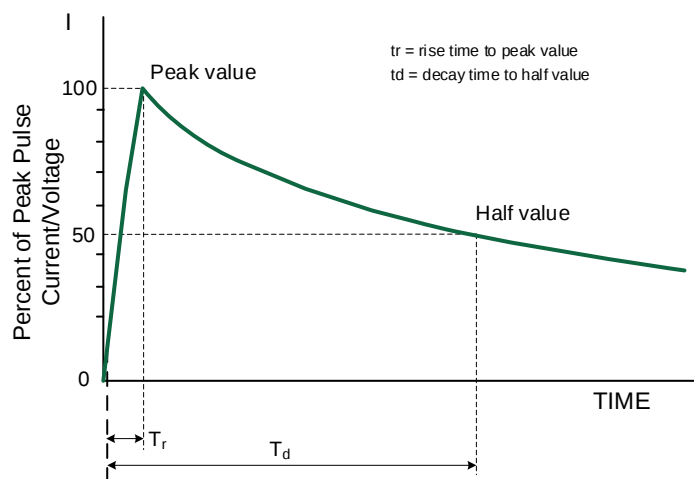
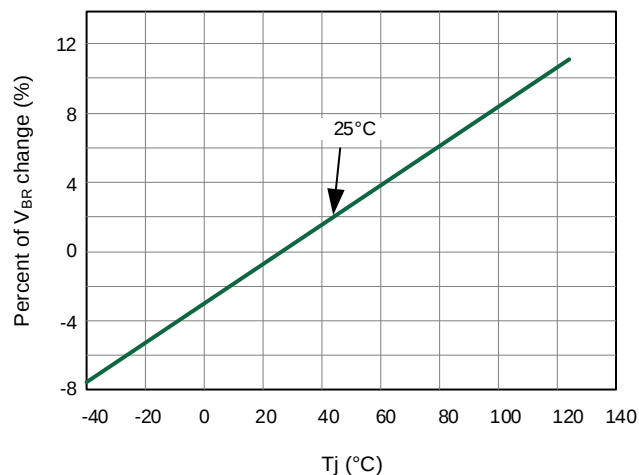
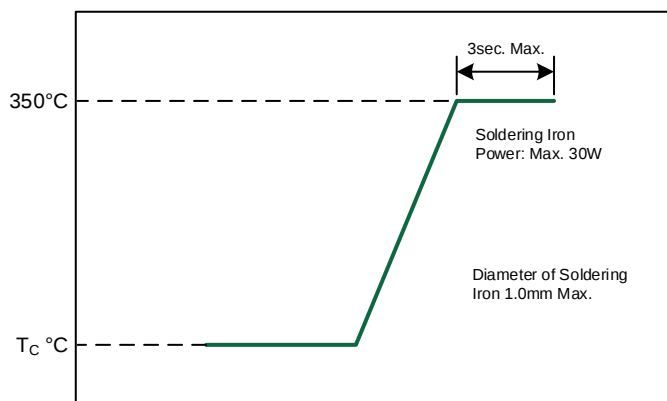
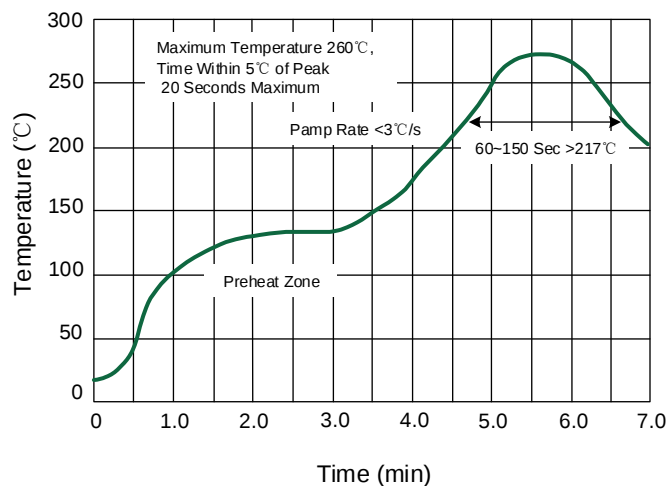
Parameter		Symbol	Value	Unit
Working Peak Reverse Voltage		V_R	1000	V
Normal Breakdown Voltage (Typ.)		V_{BR}	1360-1840	V
Operating Temperature Range		T_J	-40 to 125	°C
Storage Temperature Range		T_{STG}	-40 to 150	°C
Typical Thermal Resistance Junction to Lead	SMC	$R_{\theta JL}$	15	
Typical Thermal Resistance Junction to Ambient	SMC	$R_{\theta JA}$	75	

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-CS103 ²⁾	1600	2200	10000+20%	1000	100	SMC	b BIS CS

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

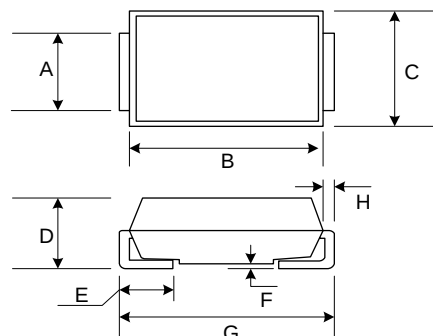
Note 2: For BIS-CS103, the parameters Vi and Vs are the total values of two components, for these two components should be used by pairs in series during installation.

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)

SMC (DO-214AB)

Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.108	0.128	2.750	3.250
B	0.260	0.280	6.500	7.110
C	0.216	0.245	5.500	6.220
D	0.081	0.116	2.060	2.950
E	0.030	0.063	0.760	1.600
F	-	0.016	-	0.400
G	0.291	0.331	7.400	8.400
H	0.006	0.012	0.152	0.305



Note: Dimension D includes pins

备注：D尺寸包含引脚

Marking System

