

HIGH-RELIABILITY PRODUCTS

Features

- Stand-off voltage 40V
- Power dissipation 600W
- SMB/DO-214AA package

Applications

- For surface mounted applications
- Reliable low cost construction utilizing molded plastic technique
- Typical I_R less than $1\mu A$
- Fast response time: less than 5.0ns for 0 Volts to V_{BR}

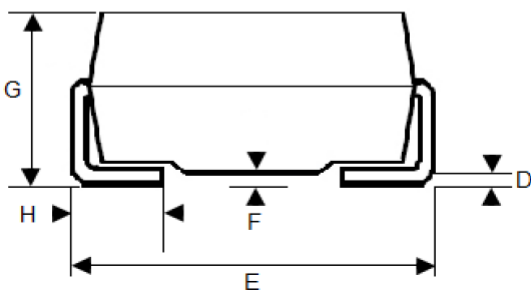
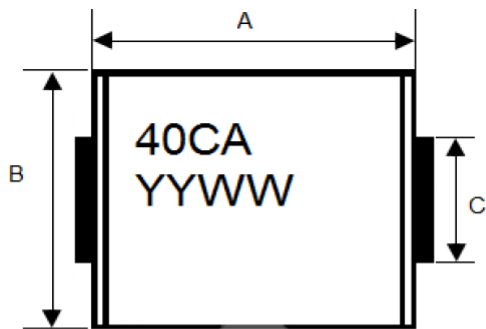
Environmental

- RoHS/WEEE compliant with applied exemption 7(a)
- Halogen free

Description

The SS10181 is a 40V, 600W bidirectional TVS in the popular SMB/DO-214AA surface mount package. It is designed to be used with Neo-Iso™ Solid State Relays TS13101, TS13102, TS13103 and TS13401.

Marking & Dimensions Information



Notes:
 (1): Component will be marked 40CA and YYWW where YYWW is a 4-digit date code.

Ordering Information

Part Number	Packaging
SS10181	Tape and reel ⁽¹⁾

Notes:
 (1): Each reel contains 2,500 units.

Dimension	Millimeters	
	Min	Max
A	4.06	4.57
B	3.30	3.94
C	1.96	2.21
D	0.15	0.31
E	5.21	5.59
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52

Absolute Maximum Rating

Parameter	Symbol	Value	Units
Peak Power Dissipation at $T_J = 25^\circ\text{C}$, $t_p = 1\text{ms}^{(1)}$	P_{PP}	600	W
Steady State Power Dissipation at $T_L = 120^\circ\text{C}^{(2)}$ see Figure 4.	PD	1.5	W
Typical Thermal Resistance ⁽²⁾	R_{THJA}	90	°C/W
	R_{THJL}	21	
	R_{THJC}	25	
Storage and Operating Junction Temperature	T_{STG}, T_J	-55 to +175	°C

Notes:

(1): Non-repetitive current pulse, per Figure 3 and derated above $T_J = 25^\circ\text{C}$ per Figure 1

(2): Thermal Resistance from junction to ambient, lead and case.

Electrical Characteristics (T=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Working Peak Reverse Voltage	V_{RWM}			40		V
Breakdown Voltage	V_{BR}	$I_{TEST} = 1.0\text{ mA}$	44.4		49.1	V
Clamping Voltage	V_{RSM}	I_{RSM}		64.5		V
Reverse Surge Current	I_{RSM}				9.3	A
Reverse Leakage	I_R	V_{RWM}			0.5	μA

Rating and Characteristic Curves

Figure 1: Pulse Derating Curve

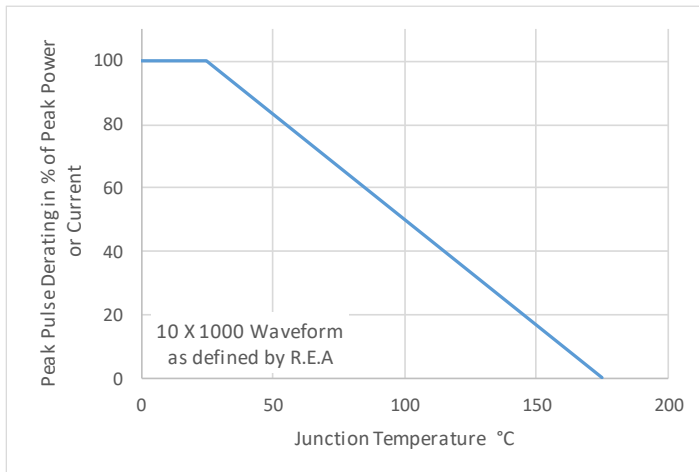


Figure 2: Maximum Non-repetitive Surge Current

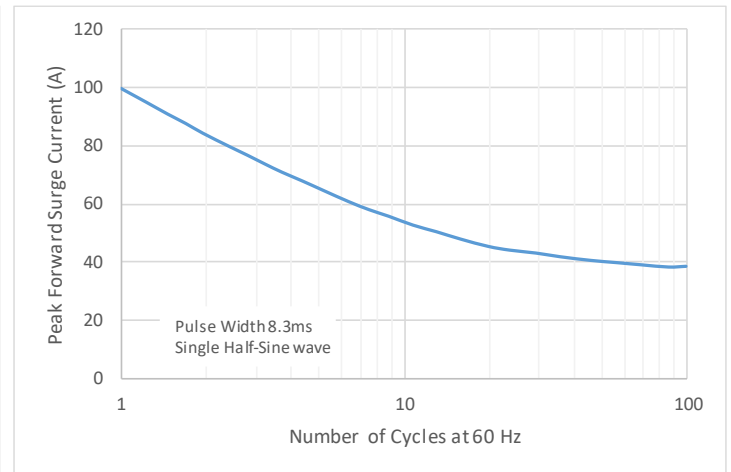


Figure 3: Pulse Waveform

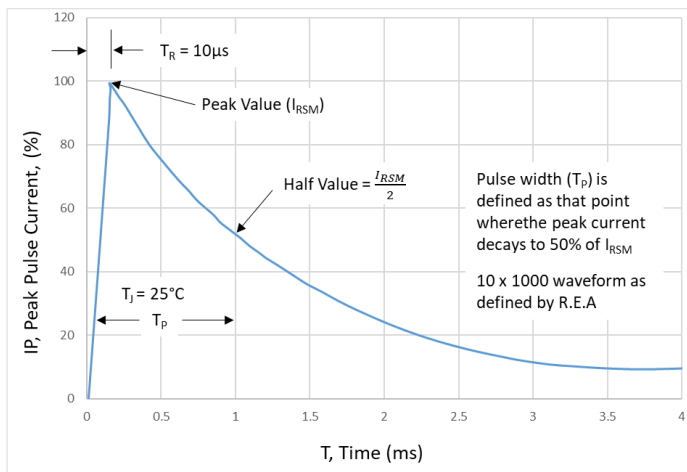


Figure 4: Typical Junction Capacitance

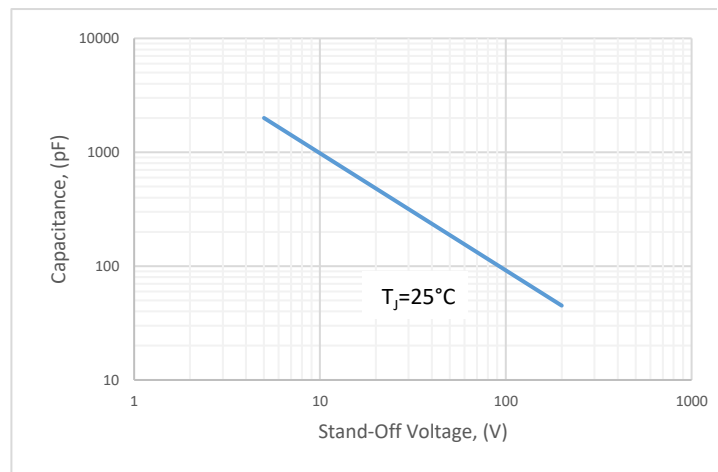


Figure 5: Pulse Rating Curve

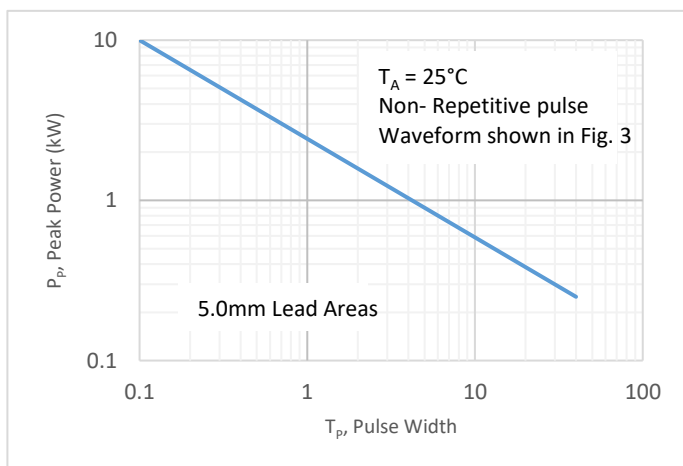
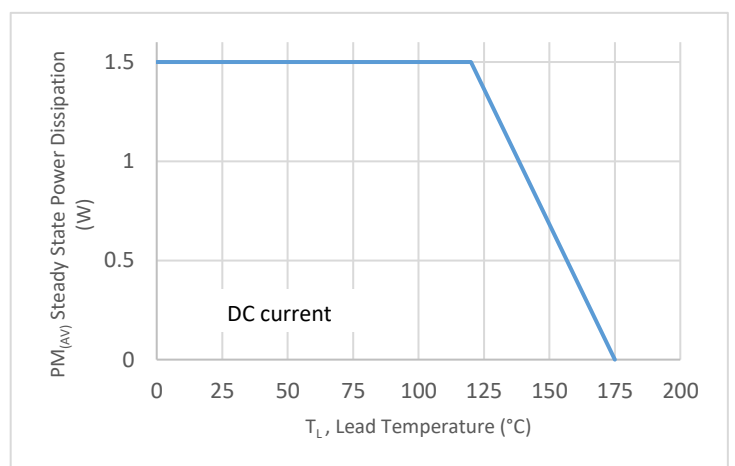


Figure 6: Steady State Power Derating Curve





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