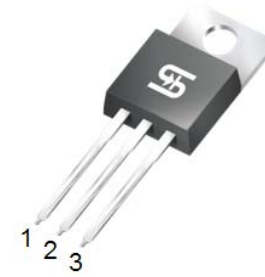


Trench Schottky Rectifier

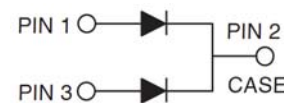
FEATURES

- Patented Trench Schottky technology
- Excellent high temperature stability
- Low forward voltage
- Low power loss/ high efficiency
- High forward surge capability
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition


TO-220AB


TYPICAL APPLICATIONS

Trench Schottky barrier rectifier are designed for high frequency miniature switched mode power supplies such as adapters, lighting and on-board DC/DC converters.



MECHANICAL DATA

Case: TO-220AB

Molding compound meets UL 94 V-0 flammability rating

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 1A whisker test

Polarity: As marked

Mounting torque: 0.56 Nm max.

Weight: 1.88 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted)												
PARAMETER		SYMBOL	TST40L 100CW		TST40L 120CW		TST40L 150CW		TST40L 200CW		UNIT	
Maximum repetitive peak reverse voltage		V _{RRM}	100		120		150		200		V	
Maximum average forward rectified current	per device	I _{F(AV)}	40								A	
	per diode		20									
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode		I _{FSM}	220								A	
Voltage rate of change (Rated V _R)		dV/dt	10000								V/μs	
			TYP	MAX	TYP	MAX	TYP	MAX	TYP	MAX		
Instantaneous forward voltage per diode (Note1)	I _F = 10A	T _J = 25°C	V _F	0.62	-	0.68	-	0.77	-	0.80	-	V
	I _F = 20A			0.75	0.83	0.80	0.88	0.86	0.96	0.88	0.98	
	I _F = 10A	T _J = 125°C		0.56	-	0.59	-	0.64	-	0.67	-	
	I _F = 20A			0.67	0.75	0.69	0.77	0.74	0.82	0.76	0.84	
Instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C	I _R		200	-	200	-	100	-	100	μA
		T _J = 125°C		6	20	6	20	3	15	3	15	mA
Typical thermal resistance per diode		R _{θJC}	2.2				2.5				°C/W	
		R _{θJL}	3.2				3.5				°C/W	
Operating junction temperature range		T _J	- 55 to +150								°C	
Storage temperature range		T _{STG}	- 55 to +150								°C	

Note 1: Pulse test with pulse width=300μs, 1% duty cycle

ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TST40LXXXCW (Note 1)	C0	G	TO-220AB	50 / Tube

Note 1: "XXX" defines voltage from 100V (TST40L100CW) to 200V (TST40L200CW)

EXAMPLE

PREFERRED PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TST40L120CW C0G	TST40L120CW	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1 FORWARD CURRENT DERATING CURVE

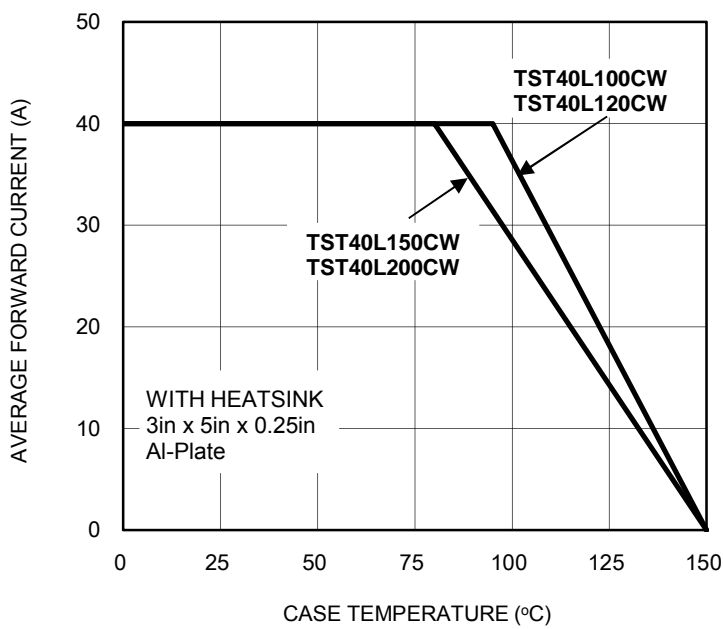


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

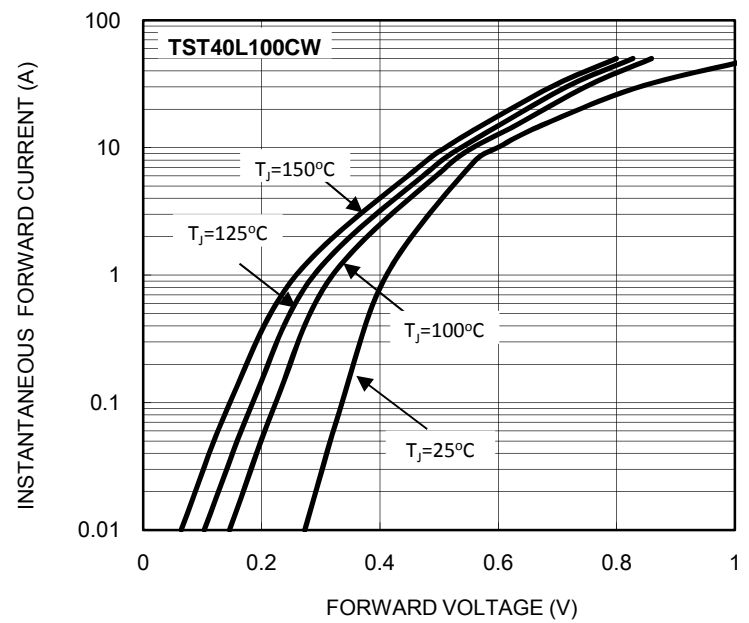


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

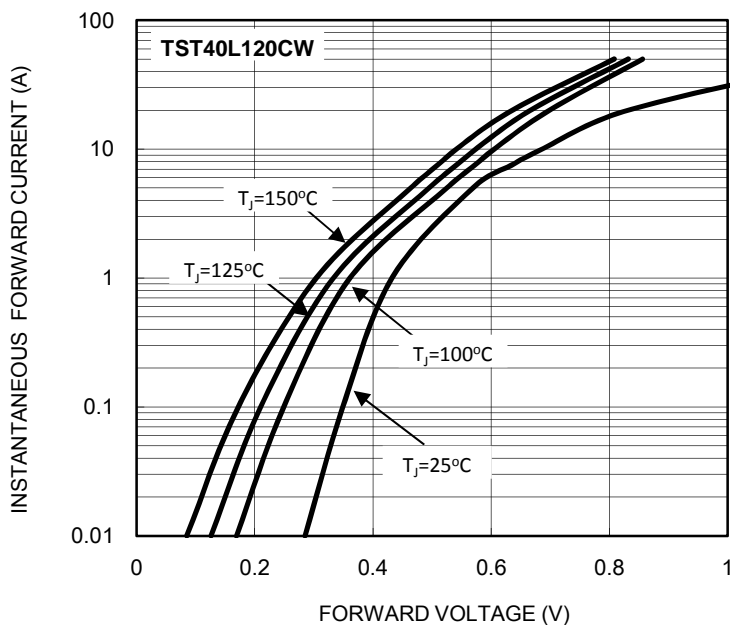


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

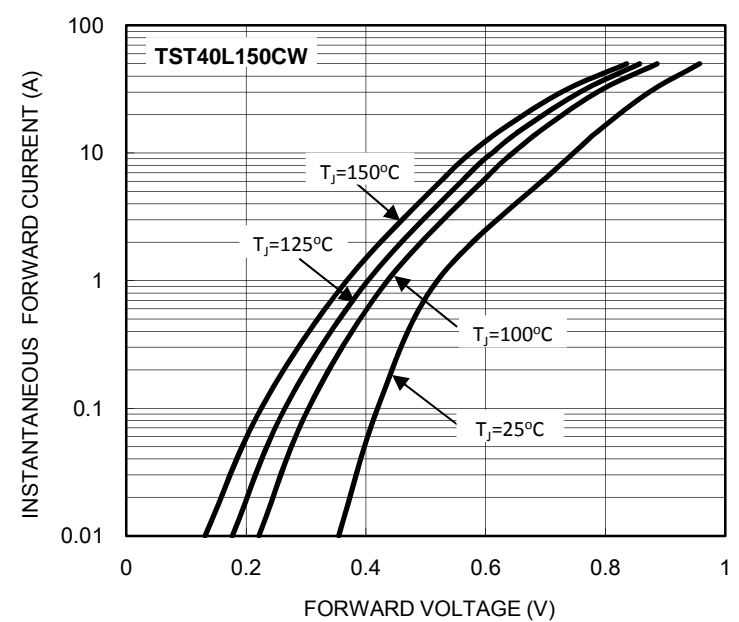


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

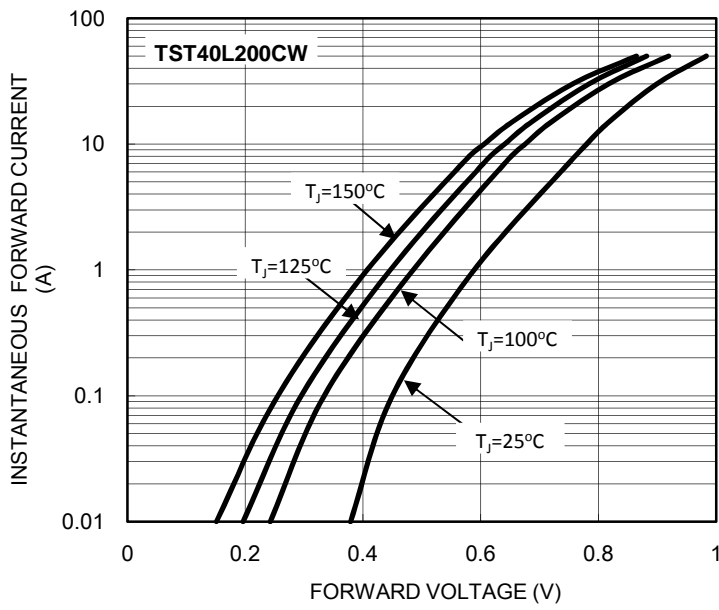


FIG. 6 TYPICAL REVERSE CHARACTERISTICS

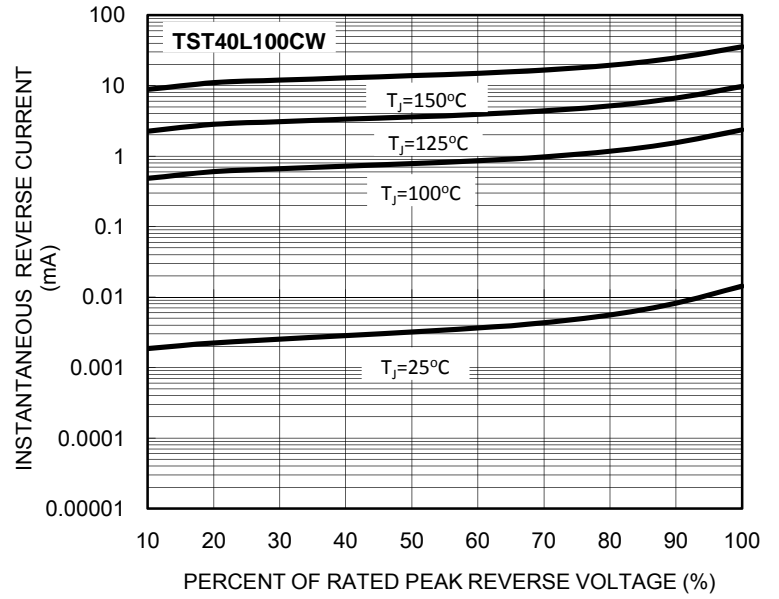


FIG. 7 TYPICAL REVERSE CHARACTERISTICS

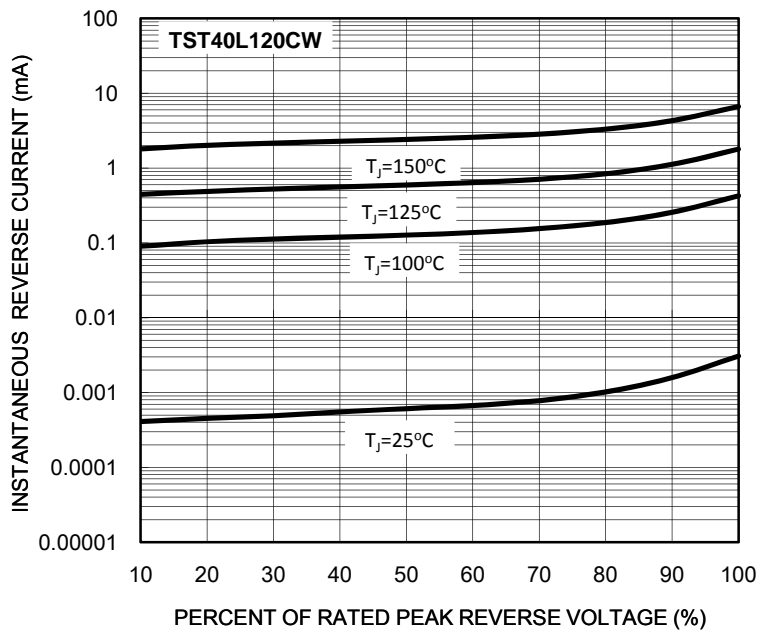


FIG. 8 TYPICAL REVERSE CHARACTERISTICS

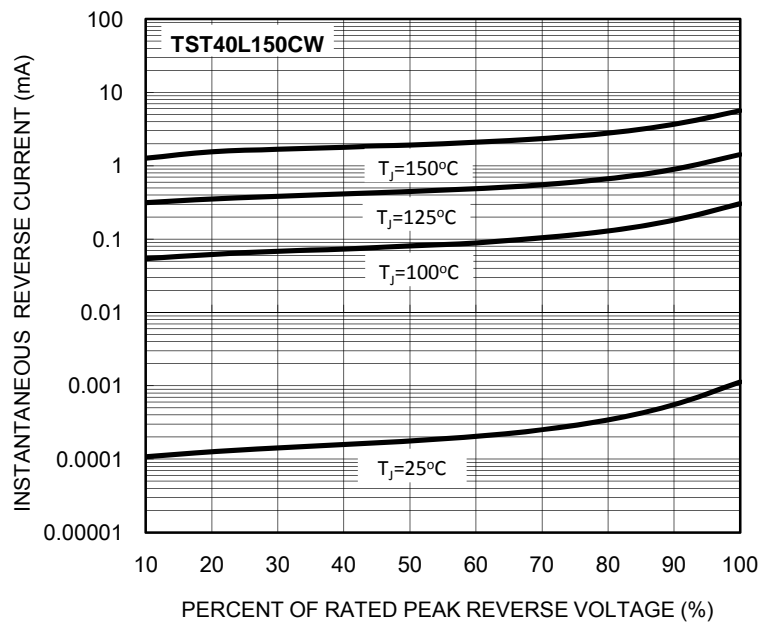


FIG. 9 TYPICAL REVERSE CHARACTERISTICS

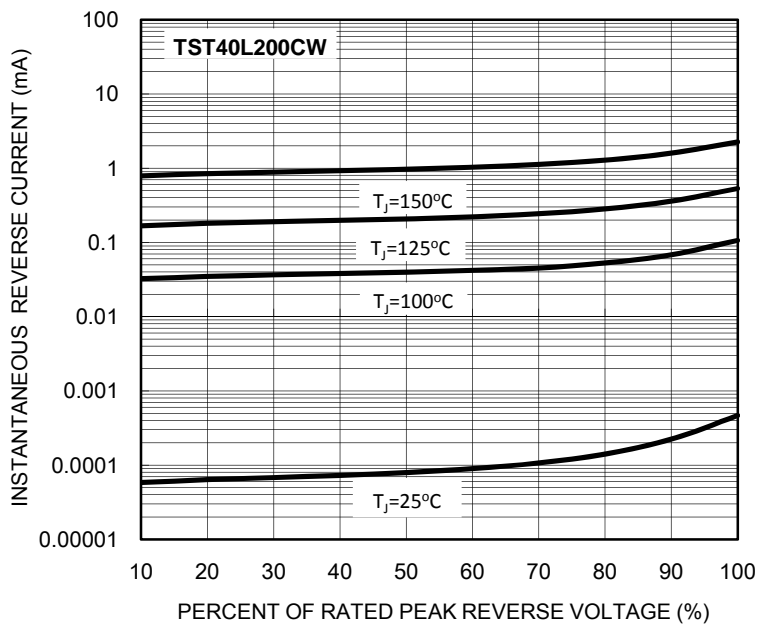
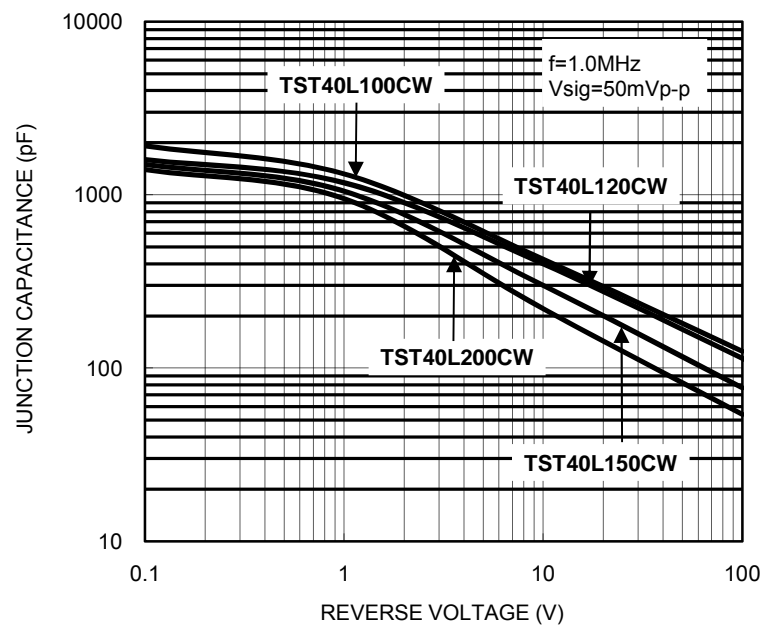
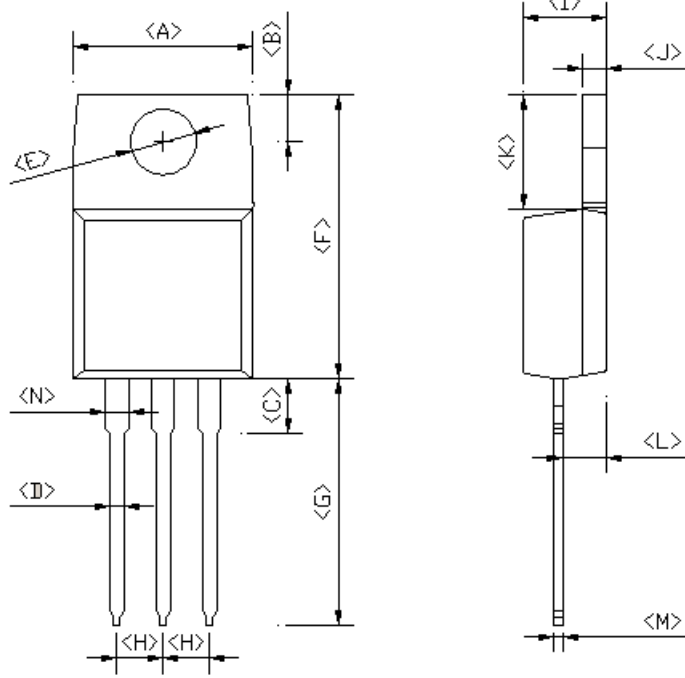


FIG. 10 TYPICAL JUNCTION CAPACTIANCE



PACKAGE OUTLINE DIMENSIONS
TO-220AB



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	-	10.50	-	0.413
B	2.54	3.44	0.100	0.135
C	2.80	4.20	0.110	0.165
D	0.68	0.94	0.027	0.037
E	3.54	4.00	0.139	0.157
F	14.60	16.00	0.575	0.630
G	13.19	14.79	0.519	0.582
H	2.41	2.67	0.095	0.105
I	4.42	4.76	0.174	0.187
J	1.14	1.40	0.045	0.055
K	5.84	6.86	0.230	0.270
L	2.20	2.80	0.087	0.110
M	0.35	0.64	0.014	0.025
N	0.95	1.45	0.037	0.057

MARKING DIAGRAM



- P/N = Specific Device Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

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