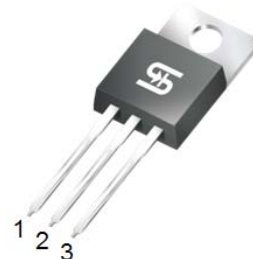


30A, 45V - 60V Trench Schottky Rectifiers

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


TO-220AB


TYPICAL APPLICATIONS

Trench Schottky barrier rectifier is designed for high frequency switched mode power supplies such as adapters, lighting and 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	TST30U45CW		TST30U60CW		UNIT
Maximum repetitive peak reverse voltage			V _{RRM}	45		60		V
Maximum average forward rectified current	per device		I _{F(AV)}	30				A
	per diode			15				
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode			I _{FSM}	250				A
Voltage rate of change (Rated V _R)			dV/dt	10000				V/μs
				TYP.	MAX.	TYP.	MAX.	
Instantaneous forward voltage per diode (Note1)	I _F = 15A	T _J = 25°C	V _F	0.45	0.55	0.48	0.58	V
	I _F = 15A	T _J = 125°C		0.39	0.49	0.42	0.52	
Maximum instantaneous reverse current per diode at rated reverse voltage		T _J = 25°C	I _R	500				μA
		T _J = 125°C		100				mA
Typical thermal resistance per diode			R _{θJC}	3				°C/W
			R _{θJL}	3				
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
TST30UXXCW (Note 1, 2)	C0	G	TO-220AB	50 / Tube

Note 1: "XX" defines voltage from 45V (TST30U45CW) to 60V (TST30U60CW)

Note 2: Whole series with green compound

EXAMPLE

EXAMPLE PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TST30U60CW C0G	TST30U60CW	C0	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

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

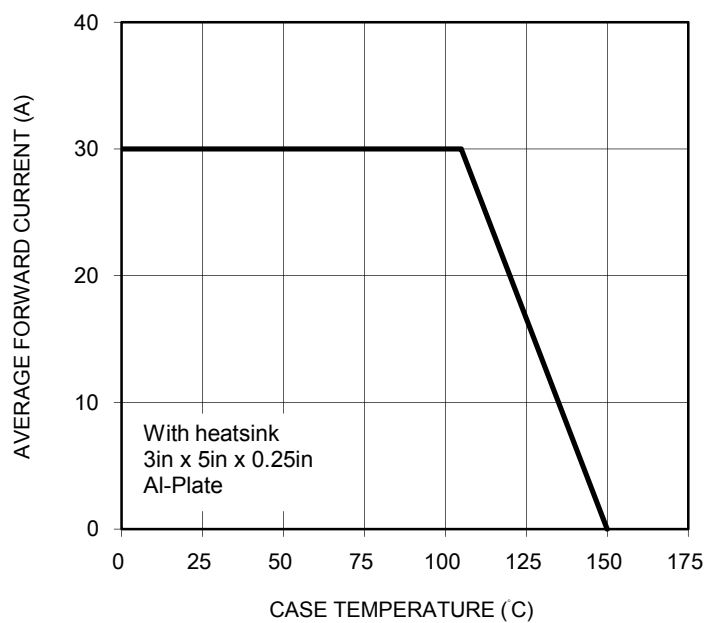
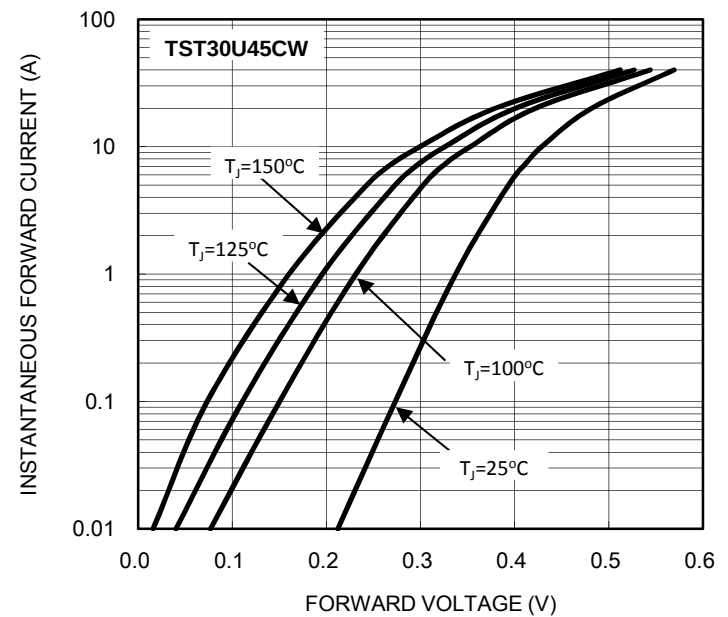
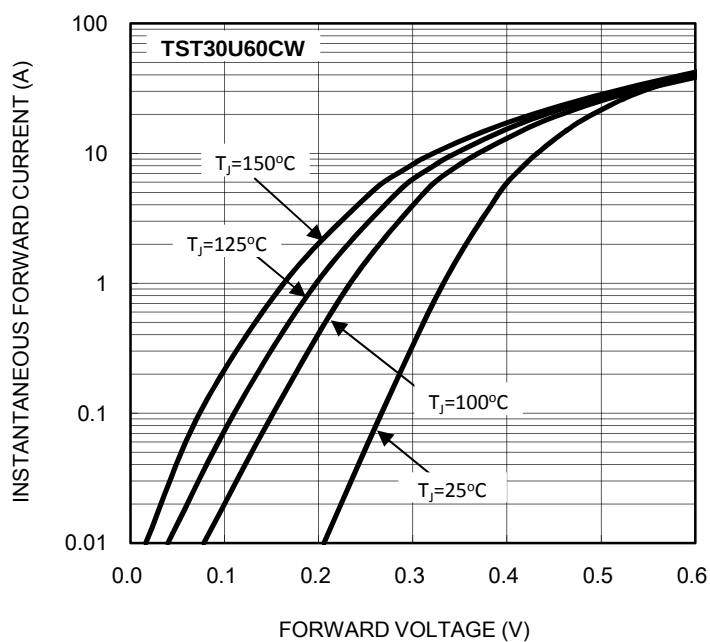
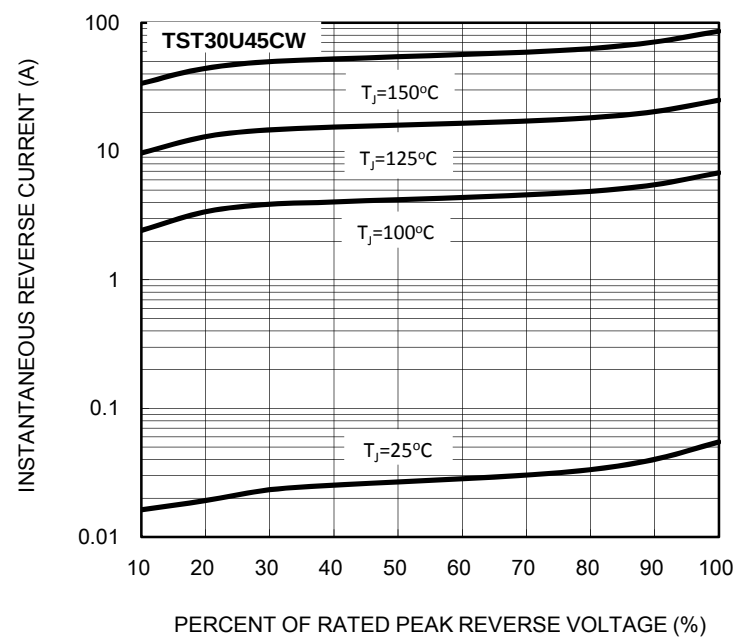
FIG.1 FORWARD CURRENT DERATING CURVE

FIG.2 TYPICAL FORWARD CHARACTERISTICS

FIG.3 TYPICAL FORWARD CHARACTERISTICS

FIG.4 TYPICAL REVERSE CHARACTERISTICS


FIG.5 TYPICAL REVERSE CHARACTERISTICS

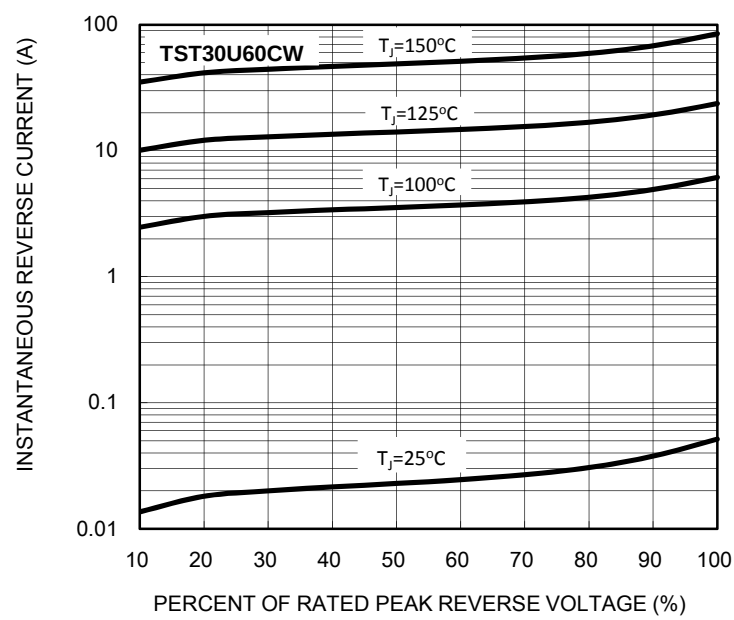


FIG.6 TYPICAL JUNCTION CAPACITANCE

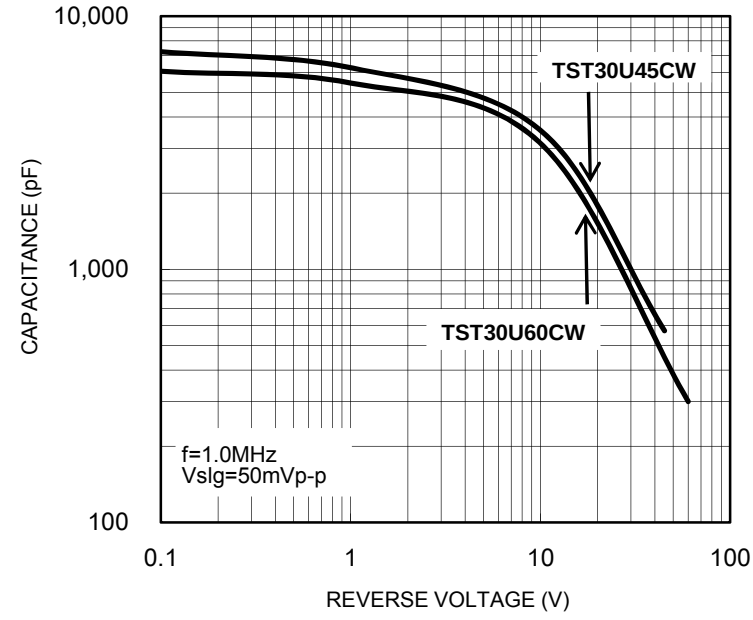
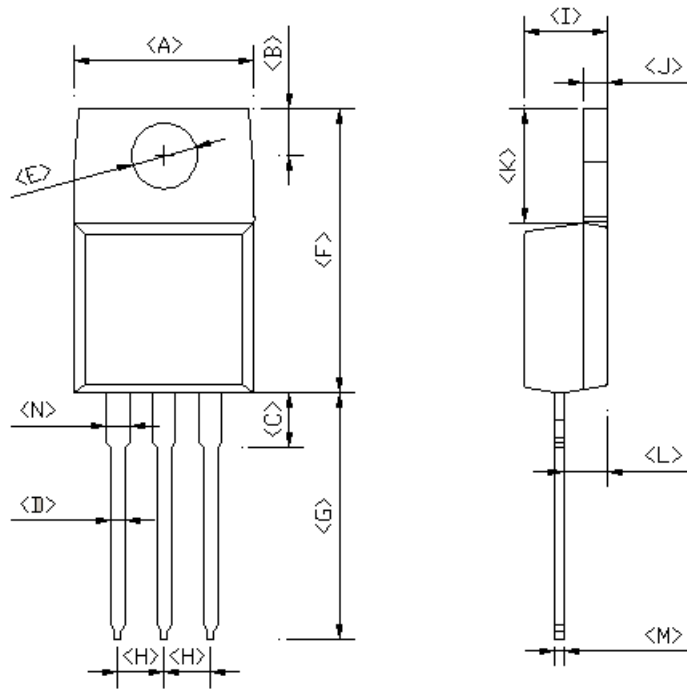


FIG. 7 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

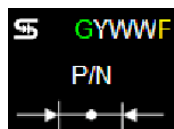


PACKAGE OUTLINE DIMENSIONS
TO-220AB



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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