

20A, 60V Trench Schottky Rectifier

FEATURES

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

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: PDFN56

Molding compound meets UL 94 V-0 flammability rating

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

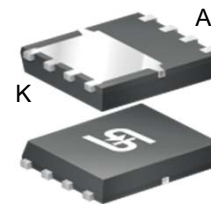
Moisture sensitivity level: level 1, per J-STD-020

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

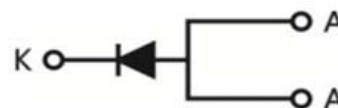
Meet JESD 201 class 1A whisker test

Polarity: As marked

Weight: 0.096g (approximately)



PDFN56

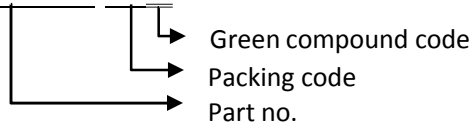


MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted)							
PARAMETER			SYMBOL	TSN520M60			UNIT
Marking code				520M60			
Maximum repetitive peak reverse voltage			V _{RRM}	60			V
Maximum DC forward current			I _{F(AV)}	20			A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load			I _{FSM}	200			A
Instantaneous forward voltage (Note 1)			V _F	MIN	TYP	MAX	V
	I _F = 10A	T _J = 25°C		-	0.43	-	
	I _F = 20A			-	0.48	0.58	
	I _F = 10A	T _J = 125°C		-	0.33	-	
	I _F = 20A			-	0.42	0.52	
Instantaneous reverse current at rated reverse voltage		T _J = 25°C	I _R	-	-	500	μA
		T _J = 125°C		-	-	100	mA
Typical thermal resistance			R _{θJL}	7			°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

ORDER INFORMATION (EXAMPLE)

TSN520M60 S3G



RATINGS AND CHARACTERISTICS CURVES

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

FIG.1 FORWARD CURRENT DERATING CURVE

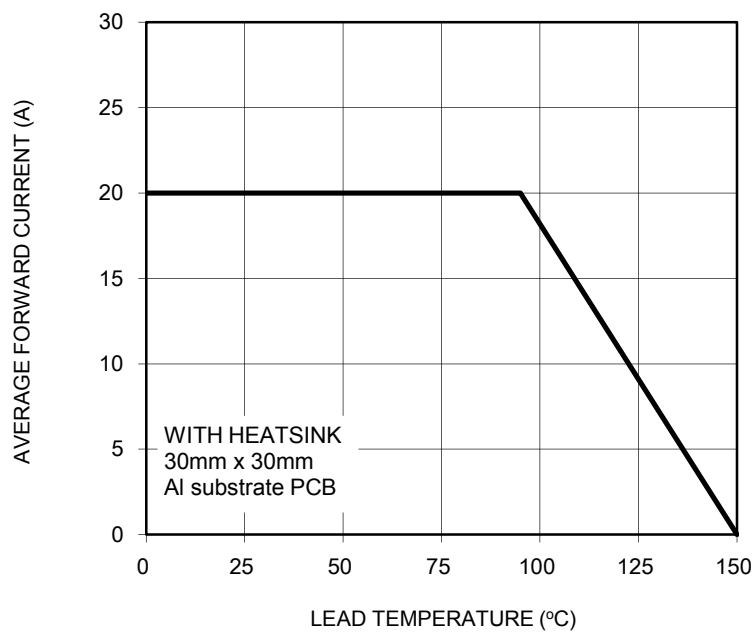


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

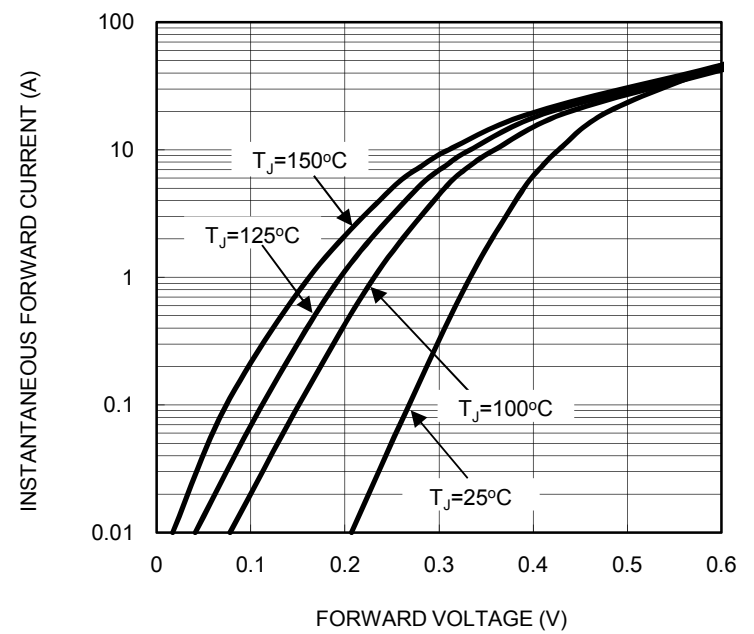


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

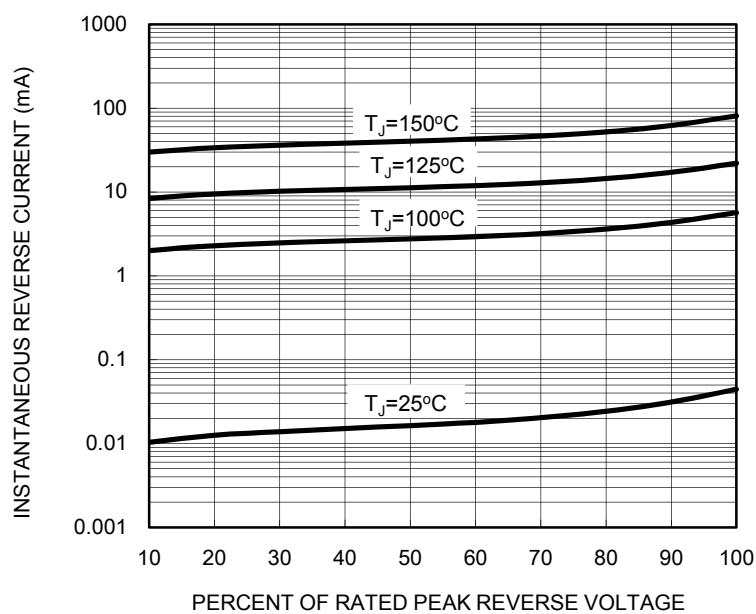
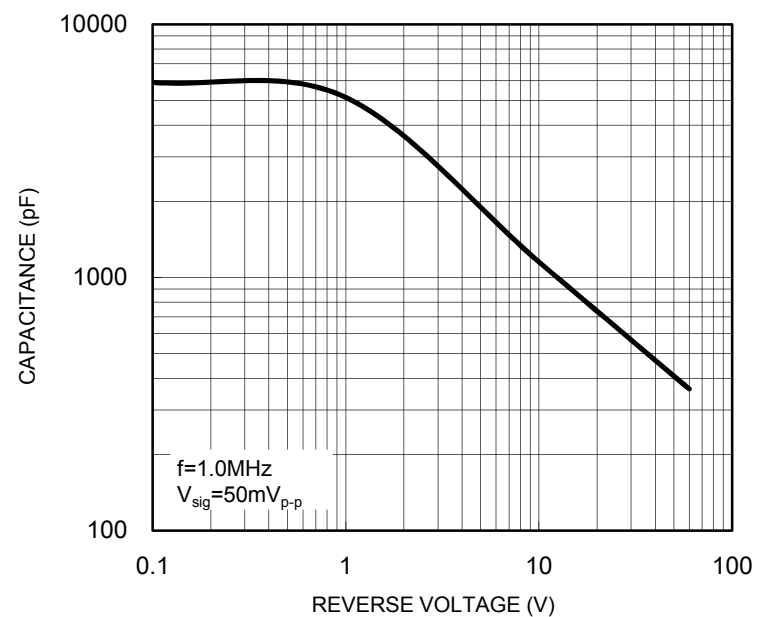
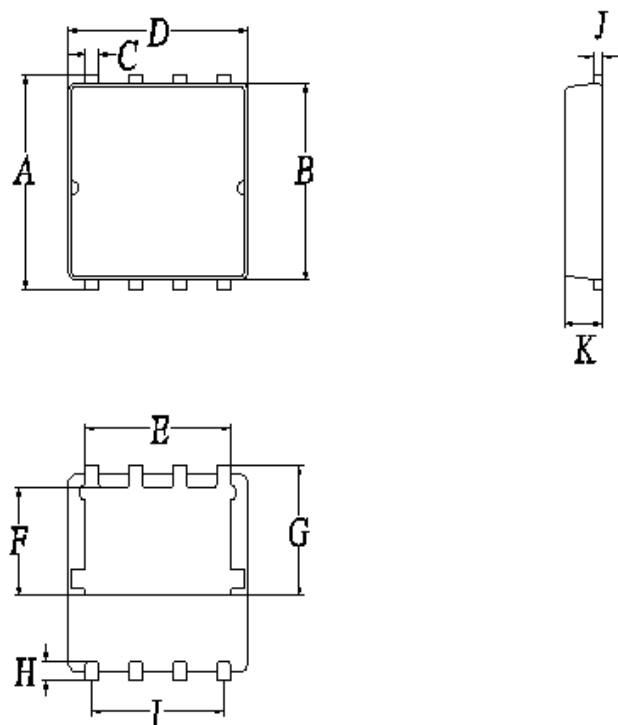


FIG. 4 TYPICAL JUNCTION CAPACITANCE

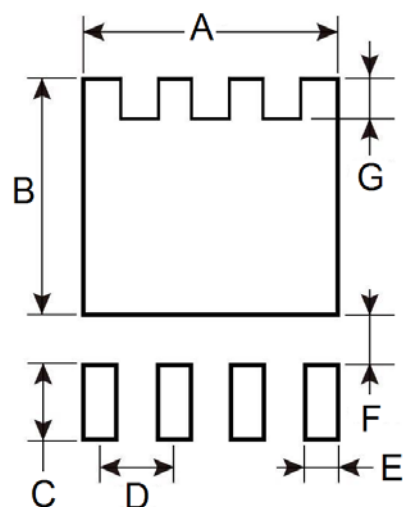


PACKAGE OUTLINE DIMENSIONS
PDFN56



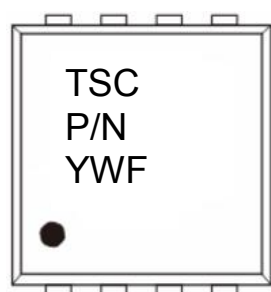
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	6.00	6.40	0.236	0.252
B	5.55	5.85	0.219	0.230
C	0.25	0.55	0.010	0.022
D	5.05	5.35	0.199	0.211
E	4.06	4.36	0.160	0.172
F	3.25	3.55	0.128	0.140
G	3.90	4.20	0.154	0.165
H	0.30	0.60	0.012	0.024
I	3.81 Typ.		0.15 Typ.	
J	0.10	0.40	0.004	0.016
K	0.95	1.25	0.037	0.049

SUGGEST PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
A	4.52	0.178
B	4.52	0.178
C	1.27	0.050
D	1.27	0.050
E	0.60	0.024
F	0.82	0.032
G	0.71	0.028

MARKING DIAGRAM



P/N = Marking Code
YW = Date Code
F = Factory Code

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