TECH PUBLIC
台舟电子

TPMEG4002ESFYL
Schottky barrier diode

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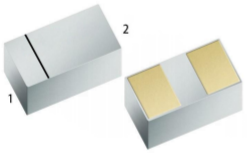
Features

- High Continuous Forward Current
- Low Reverse Current
- Very Low Forward Voltage Drop
- Very High Switching Speed

Applications

- surface mount schottky barrier rectifier
- Buck and Boost dc−dc Converters
- Reverse Voltage and Current Protection
- Clamping & Protection



CSP0201

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Reverse Voltage	VR	40	V
Forward Current (DC)	IF	200	mA
Forward Surge Current (tp = 8 ms; square wave)	IFSM	3.5	A

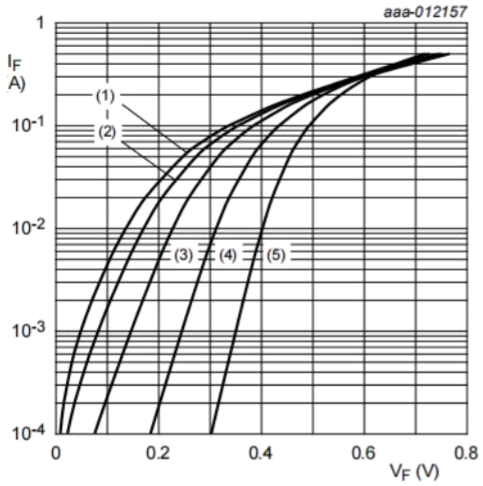
Thermal Characteristics

Parameter	Symbol	Value	Unit
Total Power Dissipation	PD	312	mW
Typical Thermal Resistance per leg @TA = 25°C	RθJA	400	°C/W
Operating Junction Temperature Range	TJ	−50 to +150	°C
Storage Temperature Range	TSTG	−50 to +150	°C
Mounted onto a 4 in square FR−4 board 10 mm sq. 1 oz. Cu 0.06” thick single sided. Operating to steady state.			

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

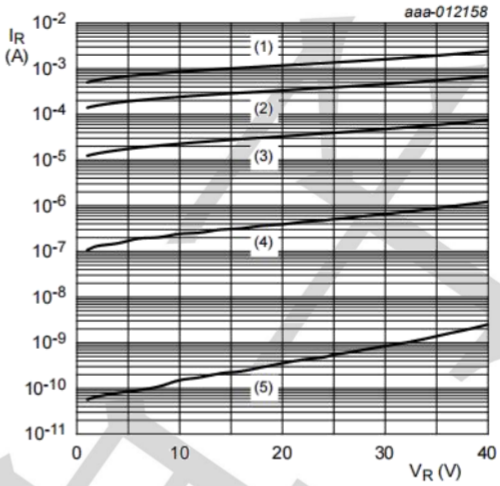
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF*	--	--	0.39	V	IF=10mA
		--	--	0.61	V	IF=200mA
Reverse Leakage	IR**	--	--	2.5	uA	VR = 10 V
		--	--	6.5	uA	VR = 40 V
Total Capacitance	CT	--	7	--	pF	VR = 10 V, f = 1 MHz
*Pulse width ≤380 uS, Duty cycle < 2%; **pulse test ， tp≤5ms						

Typical Electrical Characteristic Curves



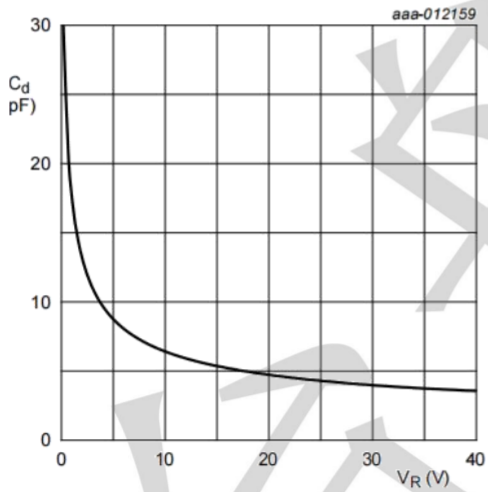
pulsed condition
(1) T_j = 150 °C
(2) T_j = 125 °C
(3) T_j = 85 °C
(4) T_j = 25 °C
(5) T_j = −40 °C

Forward current as a function of forward voltage



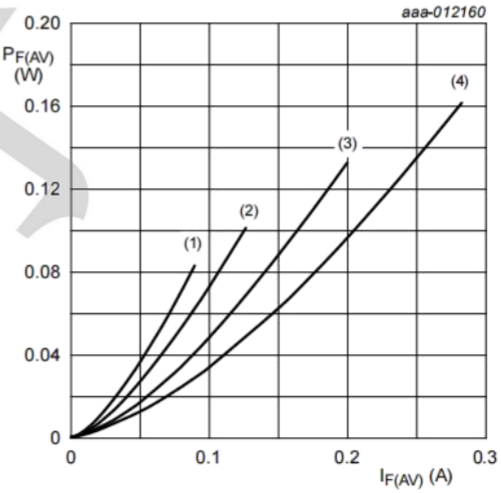
pulsed condition
(1) T_j = 150 °C
(2) T_j = 125 °C
(3) T_j = 85 °C
(4) T_j = 25 °C
(5) T_j = −40 °C

Reverse current as a function of reverse voltage



f = 1 MHz; T_{amb} = 25 °C

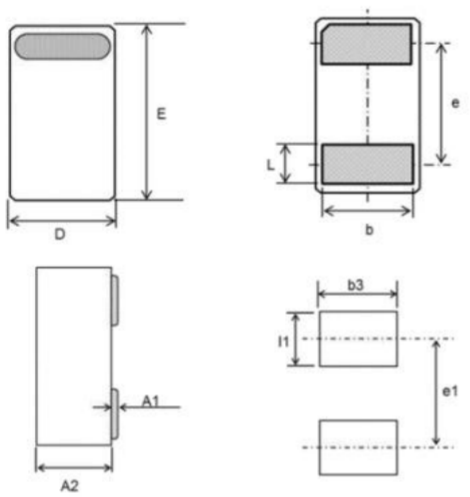
Diode capacitance as a function of reverse voltage



T_j = 150 °C
(1) δ = 0.1
(2) δ = 0.2
(3) δ = 0.5
(4) δ = 1

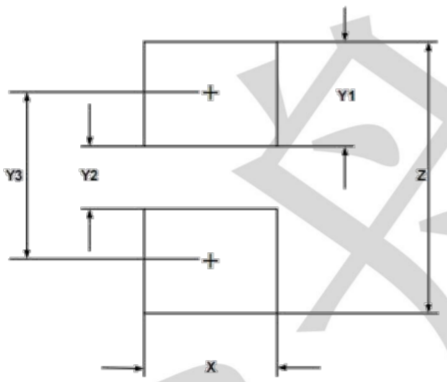
Average forward power dissipation as a function of average forward current

Outline Drawing - CSP0201



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.230	0.300	0.330
A1	0.000	0.020	0.050
b	0.215	0.245	0.275
c	0.120	0.150	0.180
D	0.550	0.600	0.650
e	0.355 BSC		
E	0.250	0.300	0.350
L	0.160	0.190	0.220
h	0.079 BSC		

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X	0.30	0.012
Y1	0.25	0.010
Y2	0.15	0.006
Y3	0.40	0.016
Z	0.65	0.026

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