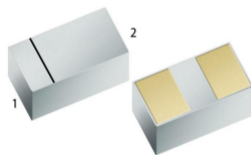


### Features

- 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



CSP0603-2



### Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Reverse Voltage	VR	20	V
Forward Current (DC)	IF	500	mA
Forward Surge Current (tp = 8 ms; square wave)	IFSM	4.5	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

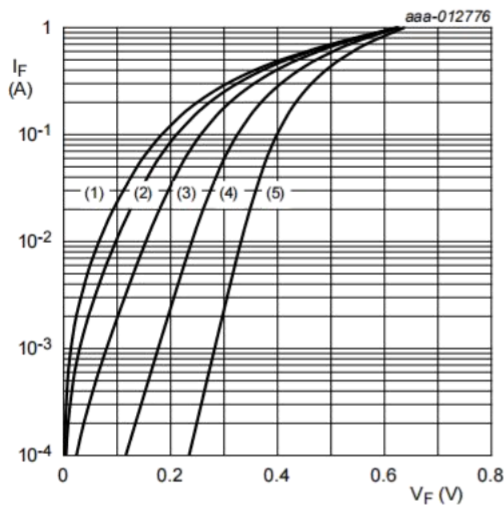
Mounted onto a 4 in square FR-4 board 10 mm sq. 1 oz. Cu 0.06" thick single sided. Operating to steady state.

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF*	--	--	0.31	V	IF=10mA
		--	--	0.65	V	IF=500mA
Reverse Leakage	IR**	--	--	25	uA	VR = 10 V
		--	--	75	uA	VR = 20 V
Total Capacitance	CT	--	10	--	pF	VR = 10 V, f = 1 MHz

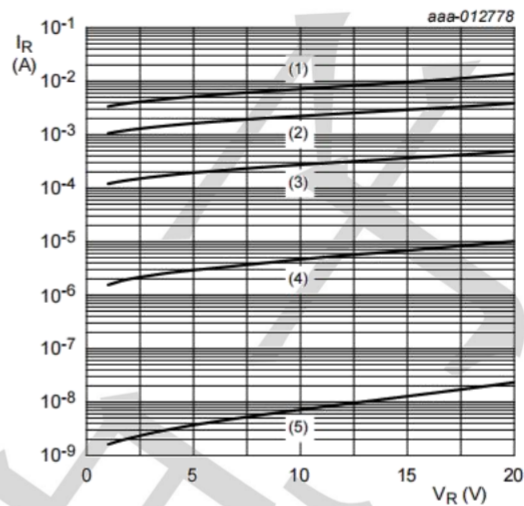
\*Pulse width ≤380 uS, Duty cycle < 2%; \*\*pulse test , tp≤5ms

**Typical Electrical Characteristic Curves**



pulsed condition

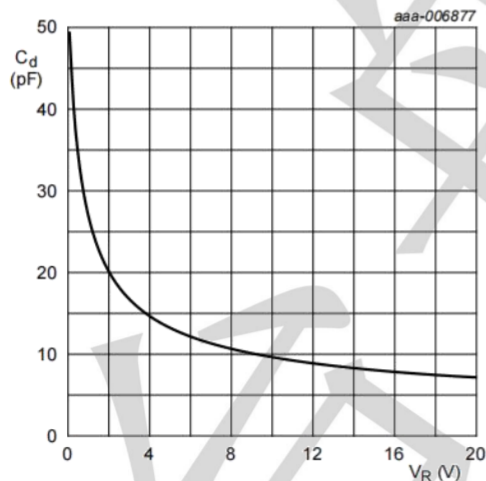
- (1)  $T_j = 150^\circ\text{C}$
- (2)  $T_j = 125^\circ\text{C}$
- (3)  $T_j = 85^\circ\text{C}$
- (4)  $T_j = 25^\circ\text{C}$
- (5)  $T_j = -40^\circ\text{C}$



pulsed condition

- (1)  $T_j = 150^\circ\text{C}$
- (2)  $T_j = 125^\circ\text{C}$
- (3)  $T_j = 85^\circ\text{C}$
- (4)  $T_j = 25^\circ\text{C}$
- (5)  $T_j = -40^\circ\text{C}$

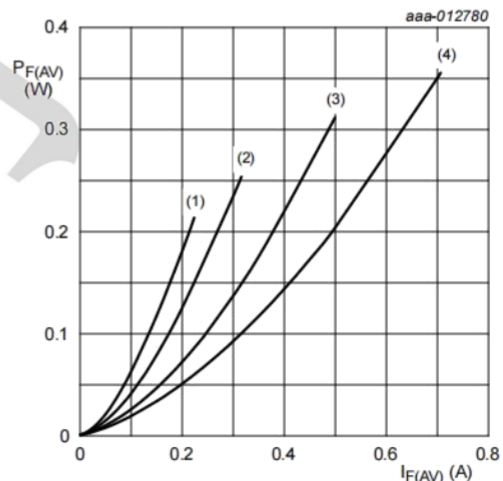
**Forward current as a function of forward voltage**



$f = 1\text{ MHz}$ ;  $T_{\text{amb}} = 25^\circ\text{C}$

**Diode capacitance as a function of reverse voltage**

**Reverse current as a function of reverse voltage**

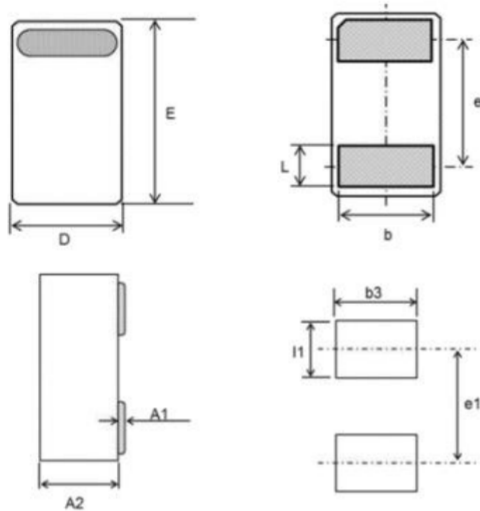


$T_j = 150^\circ\text{C}$

- (1)  $\delta = 0.1$
- (2)  $\delta = 0.2$
- (3)  $\delta = 0.5$
- (4)  $\delta = 1$

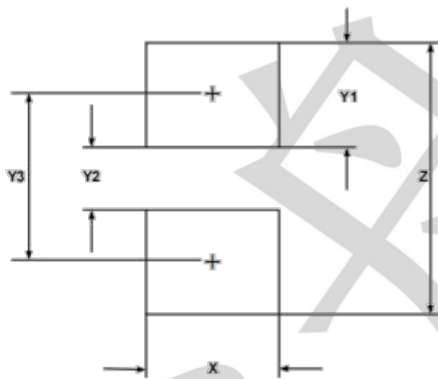
**Average forward power dissipation as a function of average forward current**

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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