

Small Signal Product

**500mW High Speed SMD Switching Diode**

FEATURES

- Designed for mounting on small surface
- Extremely thin/leadless package
- High mounting capability, strong surge with stand, high reliability
- Pb free and RoHS compliant
- Halogen free



**0805 (Ceramics)**



MECHANICAL DATA

- Case: 0805 (Ceramics)
- High temperature soldering guaranteed: 260°C/10s
- Polarity: Indicated by white cathode band
- Weight: 0.006g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P <sub>D</sub>	500	mW
Non-repetitive peak reverse voltage	V <sub>RSM</sub>	100	V
Repetitive peak reverse voltage	V <sub>RRM</sub>	75	V
Repetitive peak forward current	I <sub>FRM</sub>	300	mA
Mean forward current	I <sub>O</sub>	150	mA
Non-repetitive peak forward surge current Tp = 1s square waveform Tp = 8.3ms single half sine waveform	I <sub>FSM</sub>	0.5 2.0	A
Thermal resistance form junction ambient (Note 1)	R <sub>θJA</sub>	375	°C/W
Junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to +175	°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse breakdown voltage (Note 2)	V <sub>(BR)</sub>	-	75	V
Forward voltage I <sub>F</sub> =100mA	V <sub>F</sub>	-	1	V
Reverse leakage current V <sub>R</sub> =20V V <sub>R</sub> =75V	I <sub>R</sub>	-	25	nA
		-	5	μA
Junction capacitance V <sub>R</sub> =0, f=1.0MHz	C <sub>J</sub>		4	pF
Reverse recovery time (Note 3)	t <sub>rr</sub>		4	ns

Note: 1 Valid provided that electrodes are kept at ambient temperature

Note: 2 Test Condition: I<sub>R</sub>=100μA

Note: 3 Test Condition: I<sub>F</sub>=10mA, I<sub>R</sub>=1mA, R<sub>L</sub>=100Ω

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RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Typical Forward Characteristics

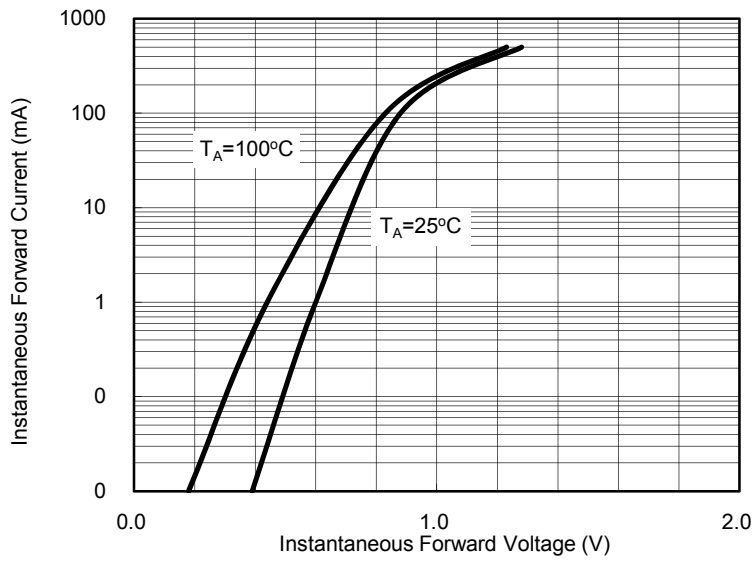


Fig. 2 Reverse Current VS. Reverse Voltage

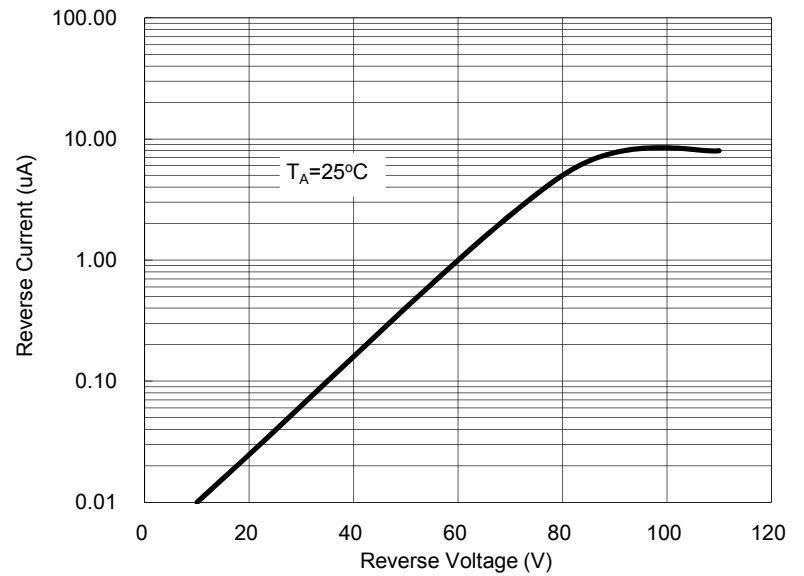


Fig. 3 Admissible Power Dissipation Curve

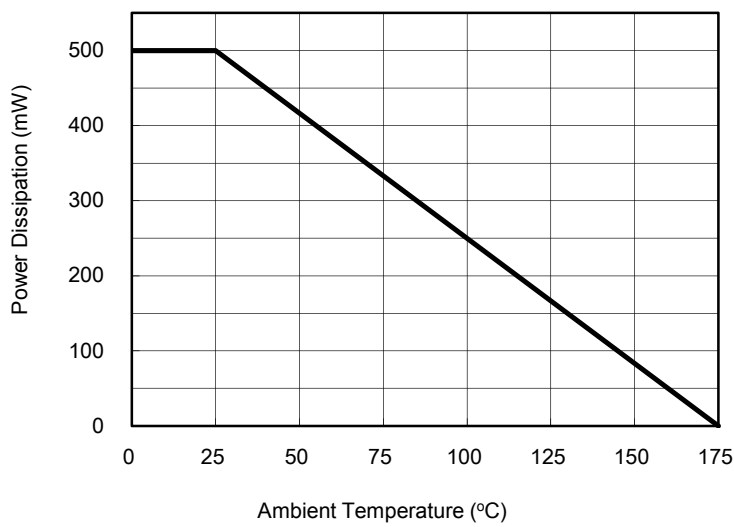


Fig. 4 Typical Junction Capacitance

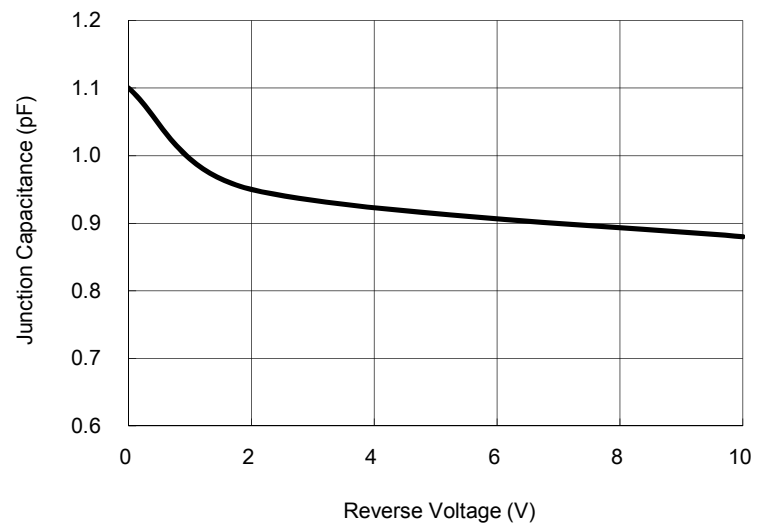
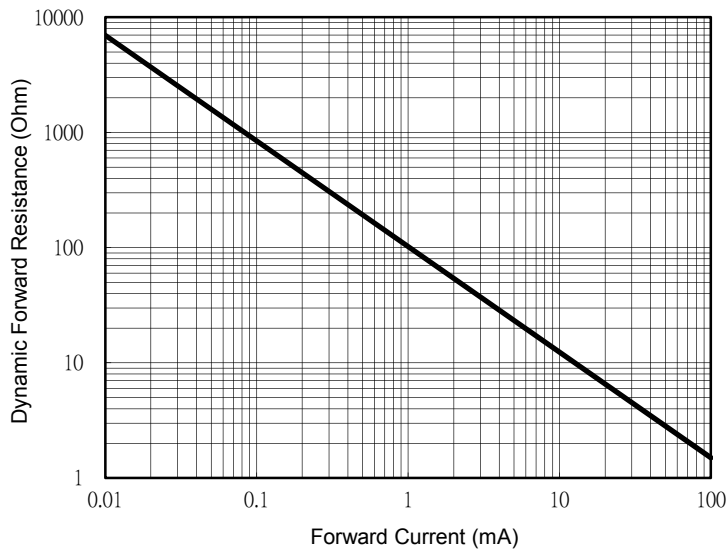


Fig. 5 Forward Resistance VS. Forward Current



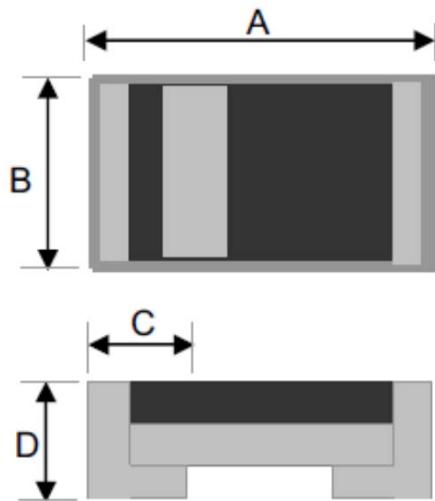
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ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TS4148 RYG	-xx (Note1)	RY	G	0805 (Ceramics)	5K / 7" Reel
		RB			10K / 13" Reel

Note 1: Part No. Suffix „-xx “ would be used for special requirement

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TS4148 RYG	TS4148		RY	G	Multiple manufacture source Green compound
TS4148-C0 RYG	TS4148	-C0	RY	G	Defined manufacture source Green compound

PACKAGE OUTLINE DIMENSIONS  
**0805 (Ceramics)**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.80	2.20	0.071	0.087
B	1.05	1.45	0.041	0.057
C	0.25	0.65	0.010	0.026
D	0.75	0.95	0.030	0.037

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