

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

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse breakdown voltage (Note 2)	V _(BR)	-	75	V
Forward voltage I _F =100mA	V _F	-	1	V
Reverse leakage current V _R =20V V _R =75V	I _R	-	25	nA
		-	5	μA
Junction capacitance V _R =0, f=1.0MHz	C _J		4	pF
Reverse recovery time (Note 3)	t _{rr}		4	ns

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

Note: 2 Test Condition: I_R=100μA

Note: 3 Test Condition: I_F=10mA, I_R=1mA, R_L=100Ω

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RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Typical Forward Characteristics

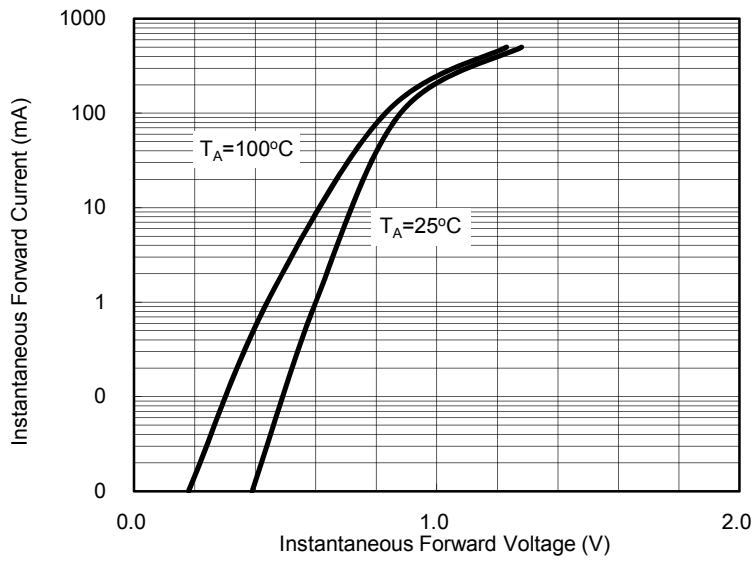


Fig. 2 Reverse Current VS. Reverse Voltage

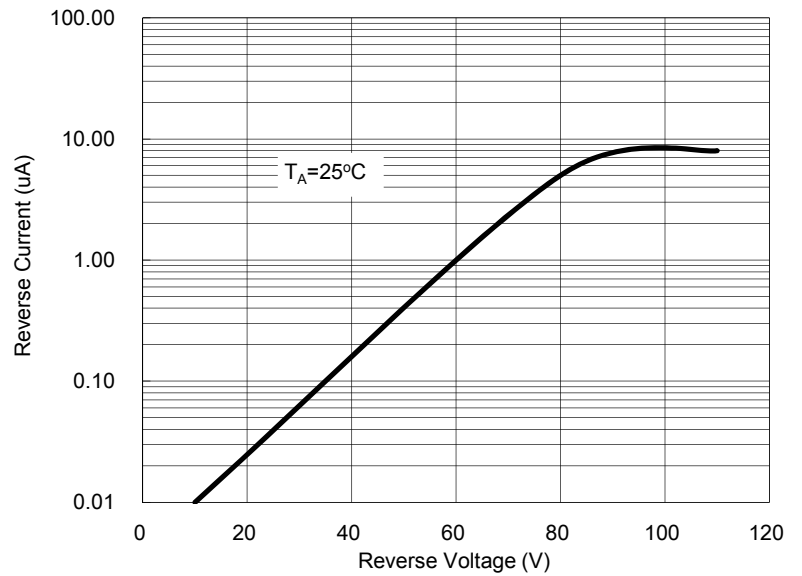


Fig. 3 Admissible Power Dissipation Curve

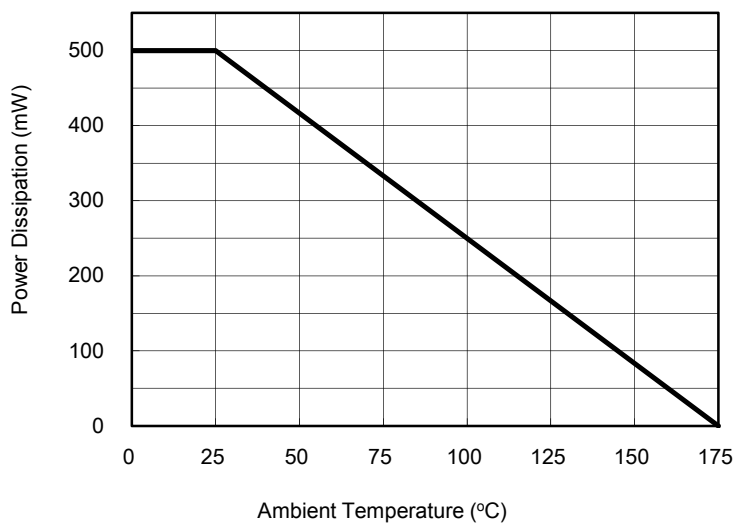


Fig. 4 Typical Junction Capacitance

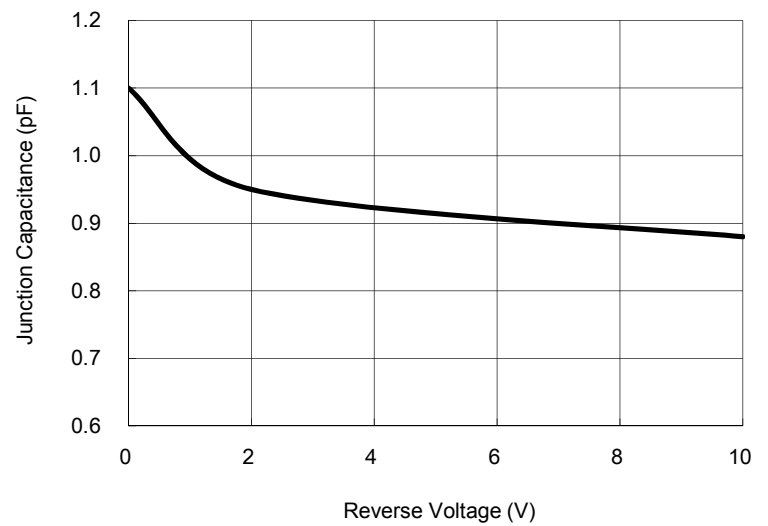
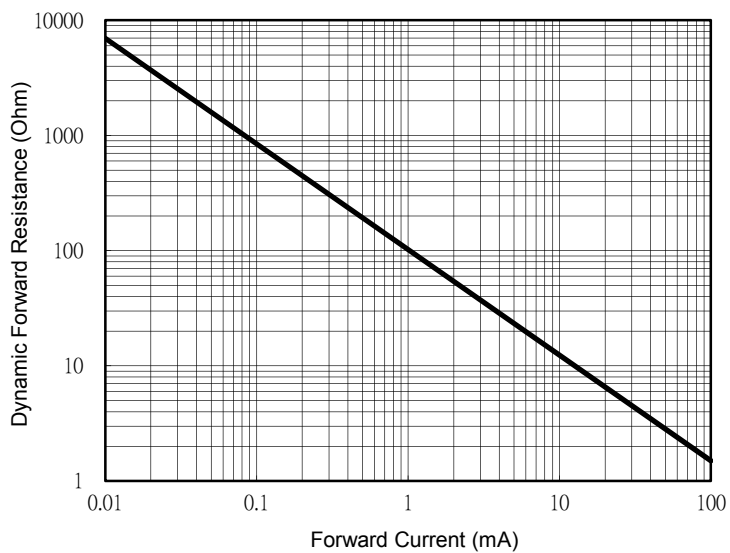


Fig. 5 Forward Resistance VS. Forward Current



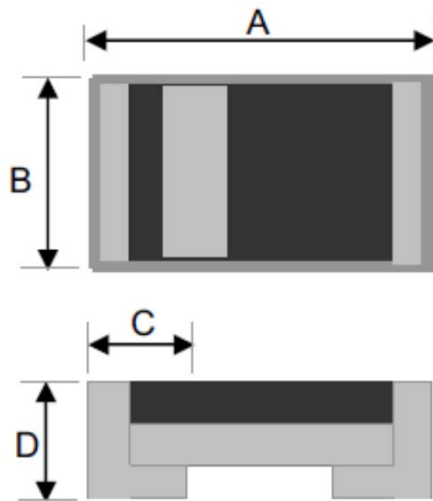
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ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TS4148 RYG	-xx (Note1)	RY	G	0805 (Ceramics)	5K / 7" Reel
		RB			10K / 13" Reel

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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