

Small Signal Product

Surface Mount Schottky Barrier

FEATURES

- Designed for mounting on small surface
- Extremely thin/leadless package
- Low capacitance
- Low forward voltage drop
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21



0603



MECHANICAL DATA

- Case: 0603
- Terminal: Gold plated, solderable per MIL-STD-750, method 2026
- Polarity : Indicated by cathode band
- Weight : 0.003 g (approximately)
- Marking code: TSS42U: BD
 TSS43U: BE

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)				
PARAMETER		SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage		V_{RRM}	30	V
Reverse Voltage		V_R	30	V
RMS Reverse Voltage		$V_{R(RMS)}$	21	V
Average Forward Current		I_O	200	mA
Repetitive Peak Forward Current		I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current Pulse Width = 8.3 ms (Single Half-Wave)		I_{FSM}	4.0	A
Power Dissipation		P_D	150	mW
Forward Voltage	TSS42U/43U $I_F = 200$ mA	V_F	1.00	V
	TSS42U $I_F = 10$ mA		0.40	
	TSS42U $I_F = 50$ mA		0.65	
	TSS43U $I_F = 2$ mA		0.33	
	TSS43U $I_F = 15$ mA		0.45	
Reverse Leakage Current	$V_R = 25$ V	I_R	0.5	μA
Typical Capacitance Between Terminals ($V_R=1\text{V}$, $f=1.0\text{MHz}$)		C_J	10	pF
Reverse Recovery Time (Note 1)		t_{rr}	5	ns
Thermal Resistance (Junction to Ambient)		$R_{\theta JA}$	667	$^\circ\text{C/W}$
Operation Junction Temperature Range		T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range		T_{STG}	-55 to +125	$^\circ\text{C}$

Note 1: Test conditions : $I_F = I_R = 10$ mA, $I_{rr} = 0.1 \times I_R$, $R_L = 100 \Omega$

RATINGS AND CHARACTERISTICS CURVES

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

Fig.1 Forward Characteristics

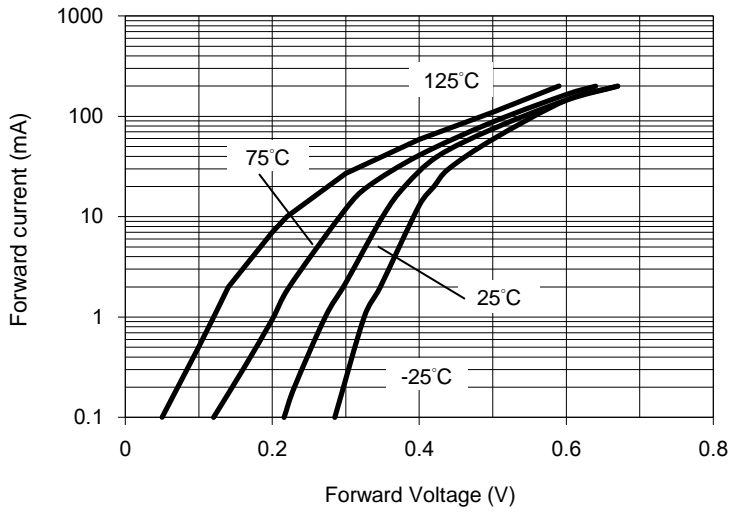


Fig. 2 Reverse Characteristics

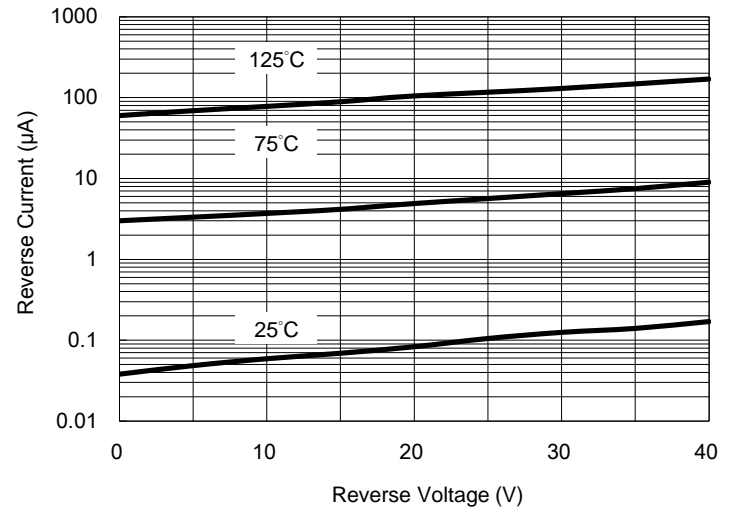


Fig. 3 Capacitance Between Terminals Characteristics

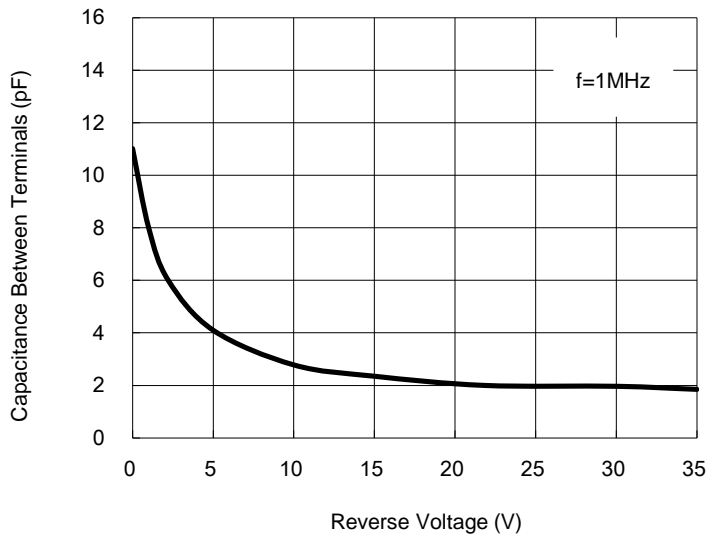
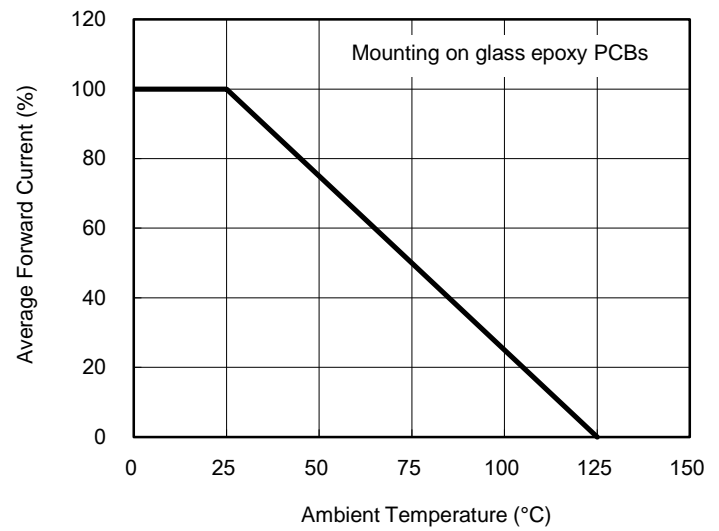


Fig. 4 Current Derating Curve



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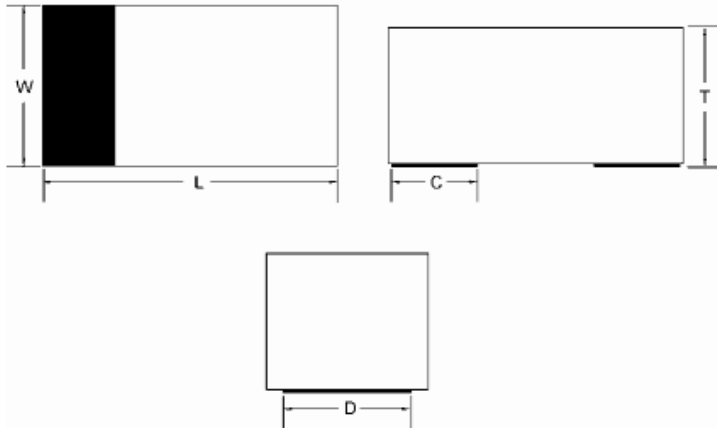
ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
TSS4xU (Note 1, 2)	RG	G	0603	4K / 7" Reel

Note 1: "x" is Device Code from "2" - "3".

Note 2: Whole series with green compound

EXAMPLE				
EXAMPLE PART NO.	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
TSS42U RGG	TSS42U	RG	G	Green compound

PACKAGE OUTLINE DIMENSION
0603



DIM.	Unit (mm)			Unit (inch)		
	Min	Typ.	Max	Min	Typ.	Max
L	1.60	-	1.80	0.063	-	0.071
W	0.80	-	1.00	0.031	-	0.039
T	0.70	-	0.85	0.028	-	0.033
C	-	0.45	-	-	0.018	-
D	-	0.70	-	-	0.028	-

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