

Small Signal Diode



Features

- ✧ Designed for mounting on small surface
- ✧ Extremely thin / leadless package
- ✧ Low capacitance
- ✧ Low forward voltage drop
- ✧ Pb free version and RoHS compliant
- ✧ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

- ✧ Case : 0603 Standard package, molded plastic
- ✧ Terminals: Gold plated, solderable per MIL-STD-750, Method 2026.
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Polarity : Indicated by cathode band
- ✧ Weight :0.003 gram (approx.)

Ordering Information

Part No.	Package	Packing	Marking	Packing code
TSS42U	0603	4K / 7" Reel	BD	RZ / RZG
TSS43U	0603	4K / 7" Reel	BE	RZ / RZG

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

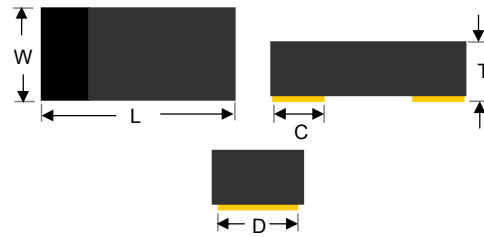
Maximum Ratings

Type Number	Symbol	Value	Units
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 (Singal Half -wave)	I_{FSM}	4.0	A
Power Dissipation	P_D	150	mW
Forward Voltage TS42U / 43U, $I_F = 200mA$	V_F	1.00	V
TS42U, $I_F = 10mA$		0.40	
TS42U, $I_F = 50mA$		0.65	
TS43U, $I_F = 2mA$		0.33	
TS43U, $I_F = 15mA$		0.45	
Reverse Leakage Current $V_R = 25V$	I_R	0.5	uA
Typical Capacitance between terminals ($V_R = 1V$, $f = 1.0MHz$)	C_J	10	pF
Reverse Recovery Time (Note 2.)	T_{rr}	5	nS
Thermal Resistance (Junction to Ambient)	$R_{\theta JA}$	667	°C/W
Operation Junction Temperature	T_J	125	°C
Storage Temperature Range	T_J, T_{STG}	-55 to + 125	°C

Notes: 1. The suggested Footprint dimensions have been provided for reference only, as actual pad layout may vary depending on application.

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

0603

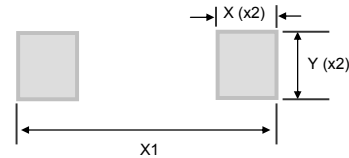


Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
L	1.60	1.80	0.063	0.071
W	0.80	1.00	0.031	0.039
T	0.70	0.85	0.028	0.033
C	0.45 (Typical)		0.018 (Typical)	
D	0.7 (Typical)		0.27 (Typical)	

Pin Configuration



Suggested Footprint Dimensions



Dimensions	Value (in mm)
X1	2.70
Y	0.80
X	1.37

RATINGS AND CHARACTERISTIC CURVES (TSS42U/TSS43U)

Fig. 1 - Forward characteristics

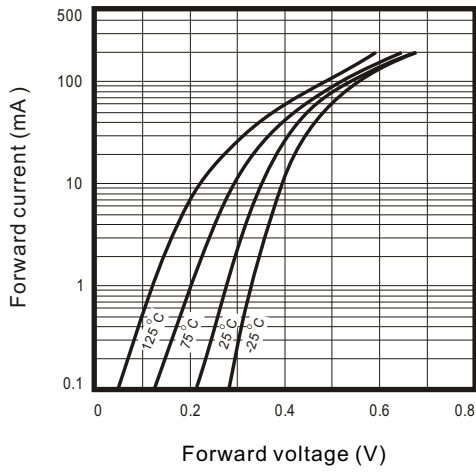


Fig. 2 - Reverse characteristics

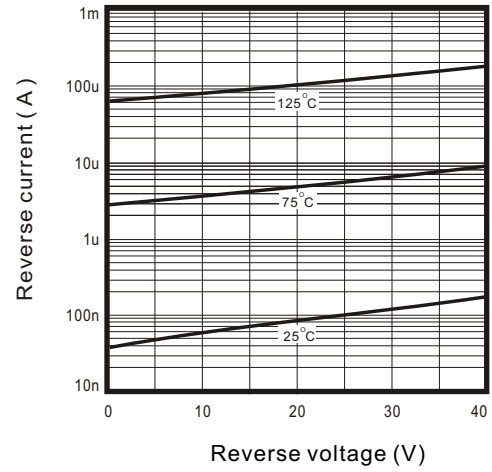


Fig.3 - Capacitance between terminals characteristics

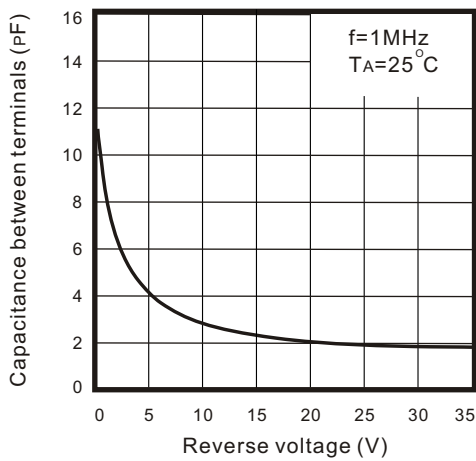
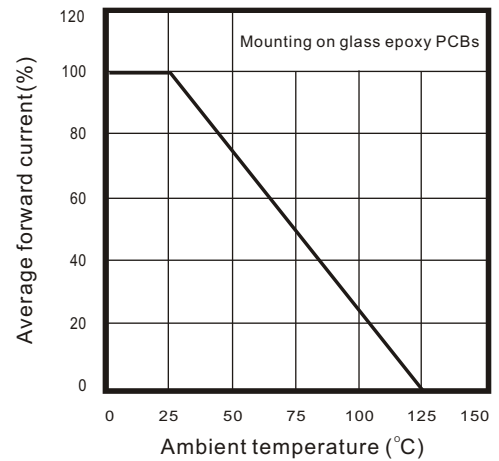


Fig.4 - Current derating curve



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Taiwan Semiconductor:](#)

[TSS42U](#) [TSS43U](#)